

ENRICHED READING



▼ *GALAXY Science Fiction* contains the finest plot ingredients . . . carefully selected from thought-ripened ideas . . . employing only the most convincing characters and conflicts, human or otherwise . . . and blended by master craftsmen into intellectually and emotionally nutritious stories.

▼ *GALAXY* is guaranteed to be touched by human hands in every stage of production—it is positively NOT machine-made fiction!

▼ Twelve issues of *GALAXY* will supply your minimum annual requirements for mature, believable science fiction.

▼ The price is 35¢ a copy, \$3.50 a year. Add \$1 per year on foreign subscriptions (70¢ less than newsstand price) and the address is . . .

GALAXY PUBLISHING CORP.

421 Hudson Street

New York 14, N. Y.

Galaxy

SCIENCE FICTION

DECEMBER 1957

35¢

FEATURING

GALLEY SLAVE

By

ISAAC
ASIMOV

•

THE
SPACESHIP
IN THE
BASEMENT

By

WILLY
LEY

CARBON COPY

By

CLIFFORD
D. SIMAK

•

AND OTHER STORIES



Can you think faster than this Machine?



Control Panel of GENIAC
set up to do a problem
in space ship engineering

Be careful before you answer. GENIAC the first electrical brain construction kit is equipped to play tic-tac-toe, cipher and encipher codes, convert from binary to decimal, reason in syllogisms, as well as add, subtract, multiply and divide. Specific problems in a variety of fields—actuarial, policy claim settlement, physics, etc., can be set up and solved with the components. Connections are solderless and are completely explained with templates in the manual. This covers 33 circuits and shows how new ones can be designed.

You will find building and using GENIACS a wonderful experience; one kit user wrote us: "this kit has opened up a new world of thinking to me." You actually see how computing, problem solving, and game play (Tic-tac-toe, nim, etc.) can be analyzed with Boolean Algebra and the algebraic solutions transformed directly into circuit diagrams. You create from over 400 specially designed and manufactured components a machine that solves problems faster than you can express them.

Schools and colleges, teachers of

science or math, engineering, philosophy or psychology will find these excellent demonstrators of circuitry, solutions in symbolic logic, theory of numbers, cybernetics, and automation.

NOTE: Teachers take advantage of our 10% discount to educational institutions and for group purchases.

Send for your GENIAC kit now. Only \$19.95 with over four hundred components and parts, fully illustrated manual and wiring diagrams. We guarantee that if you do not want to keep GENIAC after two weeks you can return it for full refund plus shipping costs.

MAIL THIS COUPON

SCIENCE KITS, Dept. GA-127

Oliver Garfield

126 Lexington Ave., N. Y. 16, N. Y.

Please send me:

1 GENIAC Electric Brain Construction Kit and Manual.

\$19.95 (East of Mississippi) _____

\$20.95 (Elsewhere in United States) _____

\$21.95 (Outside the United States) _____

Returnable in seven days for full refund if not satisfied. I enclose \$_____ in full payment.

My name and address are attached.



Naturally

Best

Choice

Each Thursday nite on Radiol
Check your local listings for the best
stories from **Galaxy** — forcefully
dramatized — its **Naturally** your
Best Choice for tops in adult Science
Fiction.



X-1=The choice from **Galaxy**, adapted by the tops at N. B. C.

OPTICAL BARGAINS

See the Stars, Moons, Planets Close Up!
3" Astronomical Reflecting Telescope
 Famous Mt. Pelémar Type!
40 & 120 Power—An Unusual Buy!



PHOTOGRAPHERS!

Align your camera in this scope for excellent Telephoto shots and fascinating photos of stars!

Assembled—Ready to Use!

You'll see the Rings of Saturn, the fascinating planet Mars, huge craters on the Moon, Star Clusters, Moons of Jupiter in detail. Guaranteed! Non-breakable aluminum-covered tube. Equatorial mount with lock on both axes. Aluminized and overcoated 3" diameter high-speed f/10 mirror. Telescope comes equipped with a 40X eyepiece and a mounted Barlow Lens, giving you 40 and 120 power. An Optimal Finder Telescope, always so essential, is also included. Sturdy, hardwood, portable tripod.

Free with scope: Valuable STAR CHART and 23-page "Astronomy Book."

Stock No. 25,050-F \$29.50 f.o.b.
 (Shipping wt. 10 lbs.) Barrington, N. J.

4 1/2" ASTRONOMICAL TELESCOPE



and 100X. Shipping

Mt. Pelémar type. Up to 100 power. A fine Reflector Telescope complete with real astronomical Mount and Tripod. Aluminum tube. 4 1/2" dia mirror, rack and pinion focusing eyepiece holder, 2 eyepieces and mounted Barlow Lens for 40X, 80X, 100X weight approx. 25 lbs.

Stock #25,006-F.....complete.....\$74.50 f.o.b.
 Barrington, N. J.

New! 2 in 1 Combination Pocket-Size 50-Power MICROSCOPE and 10-Power TELESCOPE



ONLY \$4.00 Postpaid

Perfect Telescope and Microscope combined in one amazing precision instrument! Imported! No larger than a fountain pen. Telescope in 10-Power. Microscope magnifies 24 Times! Sharp focus at any range. Handy for sports, looking at small objects, just plain enjoying.

Send Check or M. O.

Satisfaction Guaranteed.

Order Stock No. 30,059-F.....\$4.00 Postpaid

INFRARED SNIPERSCOPE TELESCOPE & PARTS

See in the dark—without being observed. War surplus Sniperscope M-3. Govt cost about \$1100. Instrument complete, ready to use. Includes Power Pack, infrared light source. Will operate from 5 T auto battery. Hailer or transformer available.



Stock No. 25,053-F
 \$150.00 f.o.b.

Save still more money! Hailer your own Sniperscope! We will furnish instructions—parts, including Power Packs, LPDA lenses tubes, light cells, filters, etc. For details—request FREE Bulletin A-24-F.

SWIVEL-CLAMP MAGNIFIER



This large 4" diameter magnifier will easily clamp onto any regular or fluorescent lighting fixture. With two ball and socket joints you can swing it in any position. Large 4" ground and polished lens in +5 diopter, 4" focal. Use both eyes—see an image with depth to it.

Stock No. 30,349-F \$4.00 Postpaid

BUILD A SOLAR ENERGY FURNACE

Great Project for Geophysical Year!



A fascinating new field. You can build your own Solar Furnace for concentration—more practical uses. It's easy—amazing! Use your scrap wood! We furnish instruction sheet. This one powerful furnace will generate terrific heat—2000° to 3000°! From a small to warm. Produces many unusual fading effects. Sets paper afire in seconds. Use our Fresnel Lens—10 1/2" diameter—F.L. 18".

Stock No. 70,130-F, pkg. of 1 \$4.00 Postpaid

Stock No. 70,131-F, pkg. of 3 11.00 Postpaid

Stock No. 70,132-F, pkg. of 4 20.00 Postpaid

GET FREE CATALOG—F

America's No. 1 source of supply for experimenters, hobbyists. World's largest variety of Optical Items, Barlow Lenses, etc. . . . War Surplus—Imported—Domestic! Microscopes, Telescopes, Scientific Spectra, Infrared Telescopes and Parts, Prisms, Lenses, Filters, Mirrors and dozens of other hard-to-get Optical Items. Write for FREE CATALOG F



ORDER BY STOCK NUMBER . SEND CHECK OR MONEY ORDER . SATISFACTION GUARANTEED!

EDMUND SCIENTIFIC CO., BARRINGTON, N. J.

THE ROUNDEST TRIP

IN India, in the village of Namakkal, near Madras, there is a shrine to the goddess Narmagiri. About 70 years ago, the father-in-law of a Brahman accountant went to that shrine to pray that his daughter would have a child.

I don't know whether the prayer had anything to do with it, but the couple did have a son not long after. And two decades later, that son asked the help of someone to write this letter to G. H. Hardy at Trinity College, Cambridge, England:

DEAR SIR:

I beg to introduce myself to you as a clerk in the Accounts Department of the Port Trust Office at Madras on a salary of only £20 per annum. I am now about 23 years of age. I have had no University education but I have undergone the ordinary school course . . . I would request you to go through the enclosed papers.

The "enclosed papers" were 120 mathematical theorems, and the name signed to the letter was "S. Ramanujan."

I wonder what G. H. Hardy made of those 120 theorems when he first looked at them, for Hardy was, though a Trinity Fellow, a

very unconventional fellow — he called God his personal enemy; he was surely the only English mathematician of standing to root for the Boston Red Sox; and he went to his death proudly boasting that nothing he had done would ever benefit a single human being (he was wrong—a paper of his supplied the clue that made it possible to keep Rh-negative babies alive).

Unconventional or not, however, a Trinity Fellow doesn't expect to find anything of much value in a babu-English letter from an office clerk.

Surprise for Mr. Hardy: "The first question was whether I would recognize anything," he wrote afterward. That was the surprise. He did. Theorem 1.8, for instance—why, LaPlace had discovered that. Others—only a man like Hardy could even recognize them—cropped up in the work of Rogers, Bauer and other men. Still others—they "defeated me completely," Hardy admitted; he couldn't recognize them, he couldn't prove them, he couldn't even make sense out of them.

But one thing was sure: "They must be true because, if they were not true, no one would have had
(Continued on page 6)

Galaxy

SCIENCE FICTION

ALL ORIGINAL STORIES • NO REPRINTS!

CONTENTS

NOVELLA

CARBON COPY *by Clifford D. Simak* 104

NOVELETS

GALLEY SLAVE *by Isaac Asimov* 8

PAYLOAD *by Raymond E. Banks* 76

SHORT STORIES

SANCTUARY *by William Tenn* 42

WHAT'S HE DOING IN THERE? *by Fritz Leiber* 69

SCIENCE DEPARTMENT

FOR YOUR INFORMATION *by Willy Ley* 57
The Spaceship in the Basement

FEATURES

EDITOR'S PAGE *by H. L. Gold* 4

GALAXY'S FIVE STAR SHELF *by Floyd C. Gale* 100

FORECAST 144

Cover by GAUGHAN Showing SALVAGE FROM 50,000,000 B.C.

ROBERT M. GUININ, Publisher

H. L. GOLD, Editor

WILLY LEY, Science Editor

W. I. VAN DER POEL, Art Director

JOAN J. De MABIO, Production Manager

GALAXY Science Fiction is published monthly by Galaxy Publishing Corporation. Main offices: 431 Hudson Street, New York 14, N. Y. 35c per copy. Subscription: (12 copies) \$3.50 per year in the United States, Canada, Mexico, South and Central America and U. S. Possessions. Elsewhere \$4.50. Entered as second-class matter at the Post Office, New York, N. Y. Copyright, New York 1957, by Galaxy Publishing Corporation, Robert M. Guinn, president. All rights, including translations reserved. All material submitted must be accompanied by self-addressed stamped envelope. The publisher assumes no responsibility for unsolicited material. All stories printed in this magazine are fiction, and any similarity between characters and actual persons is coincidental.

Printed in the U.S.A. by The Galun Co., Inc., N. Y. 14, N. Y.

Title Reg. U.S. Pat. Off.

(Continued from page 4)

the imagination to invent them . . . The writer must be completely honest, because great mathematicians are commoner than thieves or humbugs of such incredible skill."

Amazing Ramanujan! He had taught himself math out of one borrowed book, and now he was confounding the experts! He was not an impressive person: "a short uncouth figure, stout, unshaved, not overclean." He had neither degrees nor scholastic records. And yet here was a brain chained by India's awful poverty, and he couldn't help himself—he emitted mathematics as another might emit perspiration.

What he did was on that rarefied level that mathematicians despair of explaining to laymen; it had to do with the congruence properties of partitions, transformations of infinite series and the eclectic like. Numbers were his friends (he had few others). Once, in a taxi, someone pointed out the car's number—1729—and said it was a dull one. "No," said Ramanujan, "it is a very interesting number; it is the smallest number expressible as a sum of two cubes in two different ways."

He was a vegetarian; he insisted on cooking his own food, and he always changed into pajamas before cooking. And, like his grandfather, he prayed to the goddess

Namagiri for help with his math. He died when he was 33. His prayers were answered, for his papers are still of basic importance in a dozen fields—but if he'd lived, he would be only 70 now, and what might he not have discovered?

All this and much more I got from an overwhelming kind of book published by Simon & Schuster. The name of it is *The World of Mathematics* and it comes in four volumes, boxed, more than 2,500 stunning pages. Besides chapters on every sort of math proper, there are biographies of the greatest mathematicians, from Ah-mose, the Egyptian scribe, to the present day—the flyleaf of the book says "To Einstein," but it goes beyond him.

If time travel existed, I can think of few worthier—or more predictably successful—uses than to send this book back half a century to the lonely, unlovely genius of Madras. The world would benefit beyond imagination—and so would he, for he'd have found friends not only in symbols, but also in mathematical fiction by G. B. Shaw, Lewis Carroll, Aldous Huxley, Stephen Leacock, Jonathan Swift and many more.

Poor Ramanujan! A brain like that and a book like *The World of Mathematics*—what couldn't a combination of that sort produce!

—H. L. GOLD

3 Very Special Christmas Offers

That will ring the bell

GALAXY
Subscription
1 year 12 Issues \$3.00
Each additional gift
subscription
for one year
\$2.85

#1

GALAXY
NOVELS
6 different during
the year—\$1.75
Additional
subscriptions
\$1.60

#2

COMBINATION
GALAXY 12 ISSUES
NOVELS 6 ISSUES
Both for \$4.80
Additional
subscriptions
\$4.35

#3

Please fill out all the information on the order blank below and mail in with your check today. If you would prefer not defacing your magazine send your order in on plain paper, but all orders must be in before Dec. 15, 1957. The twelve month gift you yourself would like to receive. It is a perfect gift to give your friends. We will acknowledge your gift with a handsome Science Fiction Gift Card Announcement with your name as the donor. Rush your order in today.

Please enter Special Gift Subscriptions to the following and send gift card announcements. I enclose

Name _____
Address _____
City _____ State _____
Offer \$ _____ Price _____
Sign Card _____

Name _____
Address _____
City _____ State _____
Offer \$ _____ Price _____
Sign Card _____

Name _____
Address _____
City _____ State _____
Offer \$ _____ Price _____
Sign Card _____

Name _____
Address _____
City _____ State _____
Offer \$ _____ Price _____
Sign Card _____

Name _____
Address _____
City _____ State _____
Offer \$ _____ Price _____
Sign Card _____

My Name _____
Address _____
City _____ State _____

GALLEY SLAVE

The Three Laws of Positronic Robots made it impossible to kill a human, but there was a loophole . . . murdering a man after his death!

By ISAAC ASIMOV

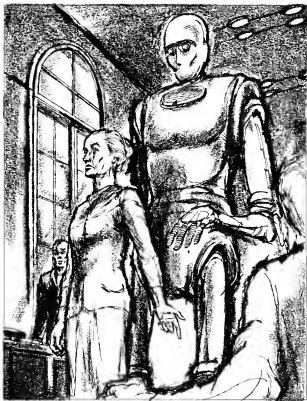
Illustrated by DICK FRANCIS

THE United States Robot and Mechanical Men, Inc., as defendants in the case, had influence enough to force a closed-doors trial without a jury.

Nor did Northeastern University try hard to prevent it. The trustees knew perfectly well how the public might react to any issue involving misbehavior of a robot, however rarefied that misbehavior might be. They also had a clearly visualized notion of how an anti-robot riot might become an anti-science riot without warning.

The government, as represented in this case by Justice Harlow Shane, was equally anxious for a quiet end to this mess. Both U. S. Robots and the academic world





were bad people to antagonize.

Justice Shane said, "Since neither press, public nor jury is present, gentlemen, let us stand on as little ceremony as we can and get to the facts."

He smiled stiffly as he said this, perhaps without much hope that his request would be effective, and hitched at his robe so that he might sit more comfortably. His face was pleasantly rubicund, his chin round and soft, his nose broad and his eyes light in color and wide-set. All in all, it was not a face with much judicial majesty and the judge knew it.

Barnabas H. Goodfellow, Professor of Physics at Northeastern U., was sworn in first, taking the usual vow with an expression that made mincemeat of his name.

After the usual opening-gambit questions, Prosecution shoved his hands deep into his pockets and said, "When was it, Professor, that the matter of the possible employ of Robot EZ-27 was first brought to your attention, and how?"

Professor Goodfellow's small and angular face set itself into an uneasy expression, scarcely more benevolent than the one it replaced. He said, "I have had professional contact and some social acquaintance with Dr. Alfred Lanning, Director of Research at U. S. Robots. I was inclined to listen with some tolerance then when I received a rather strange sugges-

tion from him on the 3rd of March of last year—"

"Of 2033?"

"That's right."

"Excuse me for interrupting. Please proceed."

The professor nodded frostily, scowled to fix the facts in his mind, and began to speak.

PROFESSOR Goodfellow looked at the robot with a certain uneasiness. It had been carried into the basement supply room in a crate, in accordance with the regulations governing the shipment of robots from place to place on the Earth's surface.

He knew it was coming; it wasn't that he was unprepared. From the moment of Dr. Lanning's first phone call on March 3, he had felt himself giving way to the other's persuasiveness, and now, as an inevitable result, he found himself face to face with a robot.

It looked uncommonly large as it stood within arm's reach.

Alfred Lanning cast a hard glance of his own at the robot, as though making certain it had not been damaged in transit. Then he turned his ferocious eyebrows and his mane of white hair in the professor's direction.

"This is Robot EZ-27, first of its model to be available for public use." He turned to the robot. "This is Professor Goodfellow, Easy."

Easy spoke impassively, but with such suddenness that the professor shied. "Good afternoon, Professor."

Easy stood seven feet tall and had the general proportions of a man — always the prime selling point of U. S. Robots. That and the possession of the basic patents on the positronic brain had given them an actual monopoly on robots and a near-monopoly on computing machines in general.

The two men who had uncrated the robot had left now and the professor looked from Lanning to the robot and back to Lanning. "It is harmless, I'm sure." He didn't sound sure.

"More harmless than I am," said Lanning. "I could be goaded into striking you. Easy could not be. You know the Three Laws of Robotics, I presume."

"Yes, of course," said Goodfellow.

"They are built into the positronic patterns of the brain and must be observed. The First Law, the prime rule of robotic existence, safeguards the life and well-being of all humans." He paused, rubbed at his cheek, then added, "It's something of which we would like to persuade all Earth if we could."

"It's just that he seems formidable."

"Granted. But whatever he seems, you'll find that he is useful."

"I'm not sure in what way. Our

conversations were not very helpful in that respect. Still, I agreed to look at the object and I'm doing it."

"We'll do more than look, Professor. Have you brought a book?"

"I have."

"May I see it?"

Professor Goodfellow reached down without actually taking his eyes off the metal-in-human-shape that confronted him. From the briefcase at his feet, he withdrew a book.

Lanning held out his hand for it and looked at the backstrip. "*Physical Chemistry of Electrolytes in Solution*. Fair enough, sir. You selected this yourself, at random. It was no suggestion of mine, this particular text. Am I right?"

"Yes."

Lanning passed the book to Robot EZ-27.

THE professor jumped a little.

"No! That's a valuable book!"

Lanning raised his eyebrows and they looked like shaggy coconut icing. He said, "Easy has no intention of tearing the book in two as a feat of strength, I assure you. It can handle a book as carefully as you or I. Go ahead, Easy."

"Thank you, sir," said Easy. Then, turning its metal bulk slightly, it added, "With your permission, Professor Goodfellow."

The professor stared, then said, "Yes—yes, of course."

With a slow and steady manipulation of metal fingers, Easy turned the pages of the book, glancing at the left page, then the right; turning the page, glancing left, then right; turning the page and so on for minute after minute.

The sense of its power seemed to dwarf even the large cement-walled room in which they stood and to reduce the two human watchers to something considerably less than life-size.

Goodfellow muttered, "The light isn't very good."

"It will do."

Then, rather more sharply, "But what is he doing?"

"Patience, sir."

The last page was turned eventually. Lanning asked, "Well, Easy?"

The robot said, "It is a most accurate book and there is little to which I can point. On line 22 of page 27, the word 'positive' is spelled p-o-s-i-t-i-v-e. The comma in line 6 of page 32 is superfluous, whereas one should have been used on line 13 of page 54. The plus sign in equation XIV-2 on page 337 should be a minus sign if it is to be consistent with the previous equations—"

"Wait! Wait!" cried the professor. "What is he doing?"

"Doing?" echoed Lanning in sudden irascibility. "Why, man, he has already done it! He has proofread that book."

"Proofread it?"

"Yes. In the short time it took him to turn those pages, he caught every mistake in spelling, grammar and punctuation. He has noted errors in word order and detected inconsistencies. And he will retain the information, letter-perfect, indefinitely."

The professor's mouth was open. He walked rapidly away from Lanning and Easy and as rapidly back. He folded his arms across his chest and stared at them. Finally he said, "You mean this is a proofreading robot?"

Lanning nodded. "Among other things."

"But why do you show it to me?"

"So that you might help me persuade the university to obtain it for use."

"To read proof?"

"Among other things," Lanning repeated patiently.

The professor drew his pinched face together in a kind of sour disbelief. "But this is ridiculous!"

"Why?"

"The university could never afford to buy this half-ton—it must weigh that at least—this half-ton proofreader."

"Proofreading is not all it will do. It will prepare reports from outlines, fill out forms, serve as an accurate memory-file, grade papers—"

"All picayune!"



LANNING said, "Not at all, as I can show you in a moment. But I think we can discuss this more comfortably in your office, if you have no objection."

"No, of course not," began the professor mechanically and took a half-step as though to turn. Then he snapped out, "But the robot—we can't take the robot. Really, Doctor, you'll have to crate it up again."

"Time enough. We can leave Easy here."

"Unattended?"

"Why not? He knows he is to stay. Professor Goodfellow, it is necessary to understand that a robot is far more reliable than a human being."

"I would be responsible for any damage—"

"There will be no damage. I guarantee that. Look, it's after hours. You expect no one here, I imagine, before tomorrow morning. The truck and my two men are outside. U. S. Robots will take any responsibility that may arise. None will. Call it a demonstration of the reliability of the robot."

The professor allowed himself to be led out of the storeroom. Nor did he look entirely comfortable in his own office, five stories up.

He dabbed at the line of droplets along the upper half of his forehead with a white handkerchief.

"As you know very well, Dr. Lanning, there are laws against the use of robots on Earth's surface," he pointed out.

"The laws, Professor Goodfellow, are not simple ones. Robots may not be used on public thoroughfares or within public edifices. They may not be used on private grounds or within private structures except under certain restrictions that usually turn out to be prohibitive. The university, however, is a large and privately owned institution that usually receives preferential treatment. If the robot is used only in a specific room for only academic purposes, if certain other restrictions are observed and if the men and women having occasion to enter the room cooperate fully, we may remain within the law."

"But all that trouble just to read proof?"

"The uses would be infinite, Professor. Robotic labor has so far been used only to relieve physical drudgery. Isn't there such a thing as mental drudgery? When a professor capable of the most useful creative thought is forced to spend two weeks painfully checking the spelling of lines of print and I offer you a machine that can do it in thirty minutes, is that pica-yune?"

"But the price—"

"The price need not bother you. You cannot buy EZ-27. U. S. Ro-

bots does not sell its products. But the university can lease EZ-27 for a thousand dollars a year—considerably less than the cost of a single micro-wave spectrophograph continuous-recording attachment."

Goodfellow looked stunned. Lanning followed up his advantage by saying, "I only ask that you put it up to whatever group makes the decisions here. I would be glad to speak to them if they want more information."

"Well," Goodfellow said doubtfully, "I can bring it up at next week's Senate meeting. I can't promise that will do any good, though."

"Naturally," said Lanning.

THE Defense Attorney was short and stubby and carried himself rather portentously, a stance that had the effect of accentuating his double chin. He stared at Professor Goodfellow, once that witness had been handed over, and said, "You agreed rather readily, did you not?"

The Professor said briskly, "I suppose I was anxious to be rid of Dr. Lanning. I would have agreed to anything."

"With the intention of forgetting about it after he left?"

"Well—"

"Nevertheless, you did present the matter to a meeting of the Executive Board of the University Senate."

"Yes, I did."

"So that you agreed in good faith with Dr. Lanning's suggestions. You weren't just going along with a gag. You actually agreed enthusiastically, did you not?"

"I merely followed ordinary procedures."

"As a matter of fact, you weren't as upset about the robot as you now claim you were. You know the Three Laws of Robotics and you knew them at the time of your interview with Dr. Lanning."

"Well, yes."

"And you were perfectly willing to leave a robot at large and unattended."

"Dr. Lanning assured me—"

"Surely you would never have accepted his assurance if you had had the slightest doubt that the robot might be in the least dangerous."

The professor began frigidly, "I had every faith in the word—"

"That is all," said Defense abruptly.

As Professor Goodfellow, more than a bit ruffled, stood down, Justice Shane leaned forward and said, "Since I am not a robotics man myself, I would appreciate knowing precisely what the Three Laws of Robotics are. Would Dr. Lanning quote them for the benefit of the court?"

Dr. Lanning looked startled. He had been virtually bumping heads with the gray-haired woman at his

side. He rose to his feet now and the woman looked up, too—expressionlessly.

Dr. Lanning said, "Very well, Your Honor." He paused as though about to launch into an oration and said, with laborious clarity, "First Law: a robot may not injure a human being, or, through inaction, allow a human being to come to harm. Second Law: a robot must obey the orders given it by human beings, except where such orders would conflict with the First Law. Third Law: a robot must protect its own existence as long as such protection does not conflict with the First or Second Laws."

"I see," said the judge, taking rapid notes. "These Laws are built into every robot, are they?"

"Into every one. That will be borne out by any roboticist."

"And into Robot EZ-27 specifically?"

"Yes, Your Honor."

"You will probably be required to repeat those statements under oath."

"I am ready to do so, Your Honor."

He sat down again.

DR. Susan Calvin, robopsychologist-in-chief for U. S. Robots, who was the gray-haired woman sitting next to Lanning, looked at her titular superior without favor, but then she showed favor to no

human being. She said, "Was Goodfellow's testimony accurate, Alfred?"

"Essentially," muttered Lanning. "He wasn't as nervous as all that about the robot and he was anxious enough to talk business with me when he heard the price. But there doesn't seem to be any drastic distortion."

Dr. Calvin said thoughtfully, "It might have been wise to put the price higher than a thousand."

"We were anxious to place Easy."

"I know. Too anxious, perhaps. They'll try to make it look as though we had an ulterior motive."

Lanning looked exasperated. "We did. I admitted that at the University Senate meeting."

"They can make it look as if we had one beyond the one we admitted."

Scott Robertson, son of the founder of U. S. Robots and still owner of a majority of the stock, leaned over from Dr. Calvin's other side and said in a kind of explosive whisper, "Why can't you get Easy to talk so we'll know where we're at?"

"You know he can't talk about it, Mr. Robertson."

"Make him. You're the psychologist, Dr. Calvin. Make him."

"If I'm the psychologist, Mr. Robertson," said Susan Calvin coldly, "let me make the decisions. My robot will not be made to do

anything at the price of his well-being."

Robertson frowned and might have answered, but Justice Shane was tapping his gavel in a polite sort of way and they grudgingly fell silent.

Francis J. Hart, head of the Department of English and Dean of Graduate Studies, was on the stand. He was a plump man, meticulously dressed in dark clothing of a conservative cut, and possessing several strands of hair traversing the pink top of his cranium. He sat well back in the witness chair with his hands folded neatly in his lap and displaying, from time to time, a tight-lipped smile.

He said, "My first connection with the matter of the Robot EZ-27 was on the occasion of the session of the University Senate Executive Committee at which the subject was introduced by Professor Goodfellow. Thereafter, on the 10th of April of last year, we held a special meeting on the subject, during which I was in the chair."

"Were minutes kept of the meeting of the Executive Committee? Of the special meeting, that is?"

"Well, no. It was a rather unusual meeting." The dean smiled briefly. "We thought it might remain confidential."

"What transpired at the meeting?"

DEAN Hart was not entirely comfortable as chairman of that meeting. Nor did the other members assembled seem completely calm. Only Dr. Lanning appeared at peace with himself. His tall, gaunt figure and the shock of white hair that crowned him reminded Hart of portraits he had seen of Andrew Jackson.

Samples of the robot's work lay scattered along the central regions of the table and the reproduction of a graph drawn by the robot was now in the hands of Professor Minott of Physical Chemistry. The chemist's lips were pursed in obvious approval.

Hart cleared his throat and said, "There seems no doubt that the robot can perform certain routine tasks with adequate competence. I have gone over these, for instance, just before coming in and there is very little to find fault with."

He picked up a long sheet of printing, some three times as long as the average book page. It was a sheet of galley proof, designed to be corrected by authors before the type was set up in page form. Along both of the wide margins of the galley were proofmarks, neat and superbly legible. Occasionally, a word of print was crossed out and a new word substituted in the margin in characters so fine and regular it might easily have been print itself. Some of the corrections were blue to indicate

the original mistake had been the author's, a few in red, where the printer had been wrong.

"Actually," said Lanning, "there is less than very little to find fault with. I should say there is nothing at all to find fault with, Dr. Hart. I'm sure the corrections are perfect, insofar as the original manuscript was. If the manuscript against which this galley was corrected was at fault in a matter of fact rather than of English, the robot is not competent to correct it."

"We accept that. However, the robot corrected word order on occasion and I don't think the rules of English are sufficiently hide-bound for us to be sure that in each case the robot's choice was the correct one."

"Easy's positronic brain," said Lanning, showing large teeth as he smiled, "has been molded by the contents of all the standard works on the subject. I'm sure you cannot point to a case where the robot's choice was definitely the incorrect one."

Professor Minott looked up from the graph he still held. "The question in my mind, Dr. Lanning, is why we need a robot at all, with all the difficulties in public relations that would entail. The science of automation has surely reached the point where your company could design a machine, an ordinary computer of a type

known and accepted by the public, that would correct galleys."

"I am sure we could," said Lanning stiffly, "but such a machine would require that the galleys be translated into special symbols or, at the least, transcribed on tapes. Any corrections would emerge in symbols. You would need to keep men employed translating words to symbols, symbols to words. Furthermore, such a computer could do no other job. It couldn't prepare the graph you hold in your hand, for instance."

Minott grunted.

LANNING went on. "The hallmark of the positronic robot is its flexibility. It can do a number of jobs. It is designed like a man so that it can use all the tools and machines that have, after all, been designed to be used by a man. It can talk to you and you can talk to it. You can actually reason with it up to a point. Compared to even a simple robot, an ordinary computer with a non-positronic brain is only a heavy adding machine."

Goodfellow looked up and said, "If we all talk and reason with the robot, what are the chances of our confusing it? I suppose it doesn't have the capability of absorbing an infinite amount of data."

"No, it hasn't. But it should last five years with ordinary use. It will know when it will require clearing,

and the company will do the job without charge."

"The company will?"

"Yes. The company reserves the right to service the robot outside the ordinary course of its duties. It is one reason we retain control of our positronic robots and lease rather than sell them. In the pursuit of its ordinary functions, any robot can be directed by any man. Outside its ordinary functions, a robot requires expert handling, and that we can give it. For instance, any of you might clear an EZ robot to an extent by telling it to forget this item or that. But you would be almost certain to phrase the order in such a way as to cause it to forget too much or too little. We would detect such tampering, because we have built-in safeguards. However, since there is no need for clearing the robot in its ordinary work, or for doing other useless things, this raises no problem."

DEAN Hart touched his head as though to make sure his carefully cultivated strands lay evenly distributed and said, "You are anxious to have us take the machine. Yet surely it is a losing proposition for U. S. Robots. One thousand a year is a ridiculously low price. Is it that you hope through this to rent other such machines to other universities at a more reasonable price?"

"Certainly that's a fair hope," said Lanning.

"But even so, the number of machines you could rent would be limited. I doubt if you could make it a paying proposition."

Lanning put his elbows on the table and earnestly leaned forward. "Let me put it bluntly, gentlemen. Robots cannot be used on Earth, except in certain special cases, because of prejudice against them on the part of the public. U. S. Robots is a highly successful corporation with our extra-terrestrial and space-flight markets alone, to say nothing of our computer subsidiaries. However, we are concerned with more than profits alone. It is our firm belief that the use of robots on Earth itself would mean a better life for all eventually, even if a certain amount of economic dislocation resulted at first.

"The labor unions are naturally against us, but surely we may expect cooperation from the large universities. The robot, Easy, will help you by relieving you of scholastic drudgery—by assuming, if you permit it, the role of galley slave for you. Other universities and research institutions will follow your lead, and if it works out, then perhaps other robots of other types may be placed and the public's objections to them broken down by stages."

Minott murmured, "Today

Northeastern University, tomorrow the world."

ANGRILY, Lanning whispered to Susan Calvin, "I wasn't nearly that eloquent and they weren't nearly that reluctant. At a thousand a year, they were jumping to get Easy. Professor Minott told me he'd never seen as beautiful a job as that graph he was holding and there was no mistake on the galley or anywhere else. Hart admitted it freely."

The severe vertical lines on Dr. Calvin's face did not soften. "You should have demanded more money than they could pay, Alfred, and let them beat you down."

"Maybe," he grumbled.

Prosecution was not quite done with Professor Hart. "After Dr. Lanning left, did you vote on whether to accept Robot EZ-27?"

"Yes, we did."

"With what result?"

"In favor of acceptance, by majority vote."

"What would you say influenced the vote?"

Defense objected immediately.

Prosecution rephrased the question. "What influenced you, personally, in your individual vote? You did vote in favor, I think."

"I voted in favor, yes. I did so largely because I was impressed by Dr. Lanning's feeling that it was our duty as members of the world's intellectual leadership to allow ro-

botics to help Man in the solution of his problems."

"In other words, Dr. Lanning talked you into it."

"That's his job. He did it very well."

"Your witness."

Defense strode up to the witness chair and surveyed Professor Hart for a long moment. He said, "In reality, you were all pretty eager to have Robot EZ-27 in your employ, weren't you?"

"We thought that if it could do the work, it might be useful."

"If it could do the work? I understand you examined the samples of Robot EZ-27's original work with particular care on the day of the meeting which you have just described."

"Yes, I did. Since the machine's work dealt primarily with the handling of the English language, and since that is my field of competence, it seemed logical that I be the one chosen to examine the work."

"Very good. Was there anything on display on the table at the time of the meeting which was less than satisfactory? I have all the material here as exhibits. Can you point to a single unsatisfactory item?"

"Well—"

"It's a simple question. Was there one single solitary unsatisfactory item? You inspected it. Was there?"

The English professor frowned. "There wasn't."

"I also have some samples of work done by Robot EZ-27 during the course of his 14-month employ at Northeastern. Would you examine these and tell me if there is anything wrong with them in even one particular?"

Hart snapped, "When he did make a mistake, it was a beauty."

"Answer my question," thundered Defense, "and only the question I am putting to you! Is there anything wrong with the material?"

Dean Hart looked cautiously at each item. "Well, nothing."

"Barring the matter concerning which we are here engaged, do you know of any mistake on the part of EZ-27?"

"Barring the matter for which this trial is being held, no."

DEFENSE cleared his throat as though to signal end of paragraph. He said, "Now about the vote concerning whether Robot EZ-27 was to be employed or not. You said there was a majority in favor. What was the actual vote?"

"Thirteen to one, as I remember."

"Thirteen to one! More than just a majority, wouldn't you say?"

"No, sir!" All the pedant in Dean Hart was aroused. "In the English language, the word 'majori-

ty' means 'more than half.' Thirteen out of fourteen is a majority, nothing more."

"But an almost unanimous one."

"A majority all the same!"

Defense switched ground. "And who was the lone holdout?"

Dean Hart looked acutely uncomfortable. "Professor Simon Ninheimer."

Defense pretended astonishment. "Professor Ninheimer? The head of the Department of Sociology?"

"Yes, sir."

"The plaintiff?"

"Yes, sir."

Defense pursed his lips. "In other words, it turns out that the man bringing the action for payment of \$750,000 damages against my client, United States Robot and Mechanical Men, Incorporated, was the one who from the beginning opposed the use of the robot—although everyone else on the Executive Committee of the University Senate was persuaded that it was a good idea."

"He voted against the motion, as was his right"

"You didn't mention in your description of the meeting any remarks made by Professor Ninheimer. Did he make any?"

"I think he spoke."

"You think?"

"Well, he *did* speak."

"Against using the robot?"

"Yes."

"Was he violent about it?"

Dean Hart paused. "He was vehement."

Defense grew confidential. "How long have you known Professor Ninheimer, Dean Hart?"

"About twelve years."

"Reasonably well?"

"I should say so, yes."

"Knowing him, then, would you say he was the kind of man who might continue to bear resentment against a robot, all the more so because an adverse vote had—"

Prosecution drowned out the remainder of the question with an indignant and vehement objection of his own. Defense motioned the witness down and Justice Shane called luncheon recess.

ROBERTSON mangled his sandwich. The corporation would not founder for loss of three-quarters of a million, but the loss would do it no particular good. He was conscious, moreover, that there would be a much more costly long-term setback in public relations.

He said sourly, "Why all this business about how Easy got into the university? What do they hope to gain?"

The Attorney for Defense said quietly, "A court action is like a chess game, Mr. Robertson. The winner is usually the one who can see more moves ahead, and my friend at the prosecutor's table is

no beginner. They can show damage; that's no problem. Their main effort lies in anticipating our defense. They must be counting on us to try to show that Easy couldn't possibly have committed the offense — because of the Laws of Robotics."

"All right," said Robertson, "that is our defense. An absolutely airtight one."

"To a robotics engineer. Not necessarily to a judge. They're setting themselves up a position from which they can demonstrate that EZ-27 was no ordinary robot. It was the first of its type to be offered to the public. It was an experimental model that needed field-testing and the university was the only decent way to provide such testing. That would look plausible in the light of Dr. Lanning's strong efforts to place the robot and the willingness of U. S. Robots to lease it for so little. The prosecution would then argue that the field-test proved Easy to have been a failure. Now do you see the purpose of what's been going on?"

"But EZ-27 was a perfectly good model," argued Robertson.

"It was the 27th in production."

"Which is really a bad point," said Defense somberly. "What was wrong with the first 26? Obviously something. Why shouldn't there be something wrong with the 27th, too?"

"There was nothing wrong with the first 26 except that they weren't complex enough for the task. These were the first positronic brains of the sort to be constructed and it was rather hit-and-miss to begin with. But the Three Laws held in all of them! No robot is so imperfect that the Three Laws don't hold."

"Dr. Lanning has explained this to me, Mr. Robertson, and I am willing to take his word for it. The judge, however, may not be. We are expecting a decision from an honest and intelligent man who knows no robotics and thus may be led astray. For instance, if you or Dr. Lanning or Dr. Calvin were to say on the stand that any positronic brains were constructed 'hit-and-miss,' as you just did, Prosecution would tear you apart in cross-examination. Nothing would salvage our case. So that's something to avoid."

Robertson growled, "If only Easy would talk."

Defense shrugged. "A robot is incompetent as a witness, so that would do us no good."

"At least we'd know some of the facts. We'd know how it came to do such a thing."

SUSAN Calvin fired up. A dullish red touched her cheeks and her voice had a trace of warmth in it. "We know how Easy came to do it. It was ordered to!

I've explained this to counsel and I'll explain it to you now."

"Ordered to by whom?" asked Robertson in honest astonishment. (No one ever told him anything, he thought resentfully. These research people considered *themselves* the owners of U. S. Robots, by God!)

"By the plaintiff," said Dr. Calvin.

"In heaven's name, why?"

"I don't know why yet. Perhaps just that we might be sued, that he might gain some cash." There were blue glints in her eyes as she said that.

"Then why doesn't Easy say so?"

"Isn't that obvious? It's been ordered to keep quiet about the matter."

"Why should that be obvious?" demanded Robertson truculently.

"Well, it's obvious to me. Robot psychology is my profession. If Easy will not answer questions about the matter directly, he will answer questions on the fringe of the matter. By measuring increased hesitation in his answers as the central question is approached, by measuring the area of blankness and the intensity of counter-potentials set up, it is possible to tell with scientific precision that his troubles are the result of an order not to talk, with its strength based on First Law. In other words, he's been told that if he talks, harm will

be done a human being. Presumably harm to the unspeakable Professor Ninheimer, the plaintiff, who, to the robot, would seem a human being."

"Well, then," said Robertson, "can't you explain that if he keeps quiet, harm will be done to U. S. Robots?"

"U. S. Robots is not a human being and the First Law of Robotics does not recognize a corporation as a person the way ordinary laws do. Besides, it would be dangerous to try to lift this particular sort of inhibition. The person who laid it on could lift it off least dangerously, because the robot's motivations in that respect are centered on that person. Any other course—" She shook her head and grew almost impassioned. "I won't let the robot be damaged!"

LANNING interrupted with the air of bringing sanity to the problem. "It seems to me that we have only to prove a robot incapable of the act of which Easy is accused. We can do that."

"Exactly," said Defense, in annoyance. "You can do that. The only witnesses capable of testifying to Easy's condition and to the nature of Easy's state of mind are employees of U. S. Robots. The judge can't possibly accept their testimony as unprejudiced."

"How can he deny expert testimony?"

"By refusing to be convinced by it. That's his right as the judge. Against the alternative that a man like Professor Ninheimer deliberately set about ruining his own reputation, even for a sizable sum of money, the judge isn't going to accept the technicalities of your engineers. The judge is a man, after all. If he has to choose between a man doing an impossible thing and a robot doing an impossible thing, he's quite likely to decide in favor of the man."

"A man can do an impossible thing," said Lanning, "because we don't know all the complexities of the human mind and we don't know what, in a given human mind, is impossible and what is not. We do know what is really impossible to a robot."

"Well, we'll see if we can't convince the judge of that," Defense replied wearily.

"If all you say is so," rumbled Robertson, "I don't see how you can."

"We'll see. It's good to know and be aware of the difficulties involved, but let's not be too downhearted. I've tried to look ahead a few moves in the chess-game, too." With a stately nod in the direction of the robopsychologist, he added, "With the help of the good lady here."

Lanning looked from one to the other and said, "What the devil is this?"

But the bailiff thrust his head into the room and announced somewhat breathlessly that the trial was about to resume.

They took their seats, examining the man who had started all the trouble.

Simon Ninheimer owned a fluffy head of sandy hair, a face that narrowed past a beaked nose toward a pointed chin, and a habit of sometimes hesitating before key words in his conversation that gave him an air of a seeker after an almost unbearable precision. When he said, "The Sun rises in the—uh—east," one was certain he had given due consideration to the possibility that it might at some time rise in the west.

Prosecution said, "Did you oppose employment of Robot EZ-27 by the university?"

"I did, sir."

"Why was that?"

"I did not feel that we understood the—uh—motives of U. S. Robots thoroughly. I mistrusted their anxiety to place the robot with us."

"Did you feel that it was capable of doing the work that it was allegedly designed to do?"

"I know for a fact that it was not."

"Would you state your reasons?"

SIMON Ninheimer's book, entitled *Social Tensions Involved in Space-Flight and Their Resolu-*

tion, had been eight years in the making. Ninheimer's search for precision was not confined to his habits of speech, and in a subject like sociology, almost inherently imprecise, it left him breathless.

Even with the material in galley proofs, he felt no sense of completion. Rather the reverse, in fact. Staring at the long strips of print, he felt only the itch to tear the lines of type apart and rearrange them differently.

Jim Baker, Instructor and soon to be Assistant Professor of Sociology, found Ninheimer, three days after the first batch of galleys had arrived from the printer, staring at the handful of paper in abstraction. The galleys came in three copies: one for Ninheimer to proofread, one for Baker to proofread independently, and a third, marked "Original," which was to receive the final corrections, a combination of those made by Ninheimer and by Baker, after a conference at which possible conflicts and disagreements were ironed out. This had been their policy on the several papers on which they had collaborated in the past three years and it worked well.

Baker, young and ingratiatingly soft-voiced, had his own copies of the galleys in his hand. He said eagerly, "I've done the first chapter and they contain some typographical beauts."

"The first chapter always has them," said Ninheimer distantly. "Do you want to go over it now?"

Ninheimer brought his eyes to grave focus on Baker. "I haven't done anything on the galleys, Jim. I don't think I'll bother."

Baker looked confused. "Not bother?"

Ninheimer pursed his lips. "I've asked about the—uh—workload of the machine. After all, he was originally—uh—promoted as a proofreader. They've set a schedule."

"The machine? You mean Easy?"

"I believe that is the foolish name they gave it."

"But, Dr. Ninheimer, I thought you were staying clear of it!"

"I seem to be the only one doing so. Perhaps I ought to take my share of the—uh—advantage."

"Oh. Well, I seem to have wasted time on this first chapter, then," said the younger man ruefully.

"Not wasted. We can compare the machine's result with yours as a check."

"If you want to, but—"

"Yes?"

"I doubt that we'll find anything wrong with Easy's work. It's supposed never to have made a mistake."

"I dare say," said Ninheimer dryly.

THE first chapter was brought in again by Baker four days later. This time it was Ninheimer's copy, fresh from the special annex that had been built to house Easy and the equipment it used.

Baker was jubilant. "Dr. Ninheimer, it not only caught everything I caught—it found a dozen errors I missed! The whole thing took it twelve minutes!"

Ninheimer looked over the sheaf, with the neatly printed marks and symbols in the margins. He said, "It is not as complete as you and I would have made it. We would have entered an insert on Suzuki's work on the neurological effects of low gravity."

"You mean his paper in *Sociological Reviews*?"

"Of course."

"Well, you can't expect impossibilities of Easy. It can't read the literature for us."

"I realize that. As a matter of fact, I have prepared the insert. I will see the machine and make certain it knows how to—uh—handle inserts."

"It will know."

"I prefer to make certain."

Ninheimer had to make an appointment to see Easy, and then could get nothing better than fifteen minutes in the late evening.

But the fifteen minutes turned out to be ample. Robot EZ-27 understood the matter of inserts at once.

Ninheimer found himself uncomfortable at close quarters with the robot for the first time. Almost automatically, as though it were human, he found himself asking, "Are you happy with your work?"

"Most happy, Professor Ninheimer," said Easy solemnly, the photo-cells that were its eyes gleaming their normal deep red.

"You know me?"

"From the fact that you present me with additional material to include in the galleys, it follows that you are the author. The author's name, of course, is at the head of each sheet of galley proof."

"I see. You make—uh—deductions, then. Tell me—" he couldn't resist the question—"what do you think of the book so far?"

Easy said, "I find it very pleasant to work with."

"Pleasant? That is an odd word for a—uh—a mechanism without emotion. I've been told you have no emotion."

"The words of your book go in accordance with my circuits," Easy explained. "They set up little or no counter-potentials. It is in my brain-paths to translate this mechanical fact into a word such as 'pleasant.' The emotional context is fortuitous."

"I see. Why do you find the book pleasant?"

"It deals with human beings, Professor, and not with inorganic

materials or mathematical symbols. Your book attempts to understand human beings and to help increase human happiness."

"And this is what you try to do and so my book goes in accordance with your circuits? Is that it?"

"That is it, Professor."

The fifteen minutes were up. Ninheimer left and went to the university library, which was on the point of closing. He kept them open long enough to find an elementary text on robotics. He took it home with him.

EXCEPT for occasional insertion of late material, the galleys went to Easy and from him to the publishers with little intervention from Ninheimer at first—and none at all later.

Baker said, a little uneasily, "It almost gives me a feeling of uselessness."

"It should give you a feeling of having time to begin a new project," said Ninheimer, without looking up from the notations he was making in the current issue of *Social Science Abstracts*.

"I'm just not used to it. I keep worrying about the galleys. It's silly, I know."

"It is."

"The other day I got a couple of sheets before Easy sent them off to—"

"What!" Ninheimer looked up,

scowling. The copy of *Abstracts* slid shut. "Did you disturb the machine at its work?"

"Only for a minute. Everything was all right. Oh, it changed one word. You referred to something as 'criminal'; it changed the word to 'reckless.' It thought the second adjective fit in better with the context."

Ninheimer grew thoughtful. "What did you think?"

"You know, I agreed with it. I let it stand."

Ninheimer turned in his swivel-chair to face his young associate. "See here, I wish you wouldn't do this again. If I am to use the machine, I wish the—uh—full advantage of it. If I am to use it and lose your — uh — services anyway because you supervise it when the whole point is that it requires no supervision, I gain nothing. Do you see?"

"Yes, Dr. Ninheimer," said Baker, subdued.

The advance copies of *Social Tensions* arrived in Dr. Ninheimer's office on the 8th of May. He looked through it briefly, flipping pages and pausing to read a paragraph here and there. Then he put his copies away.

As he explained later, he forgot about it. For eight years, he had worked at it, but now, and for months in the past, other interests had engaged him while Easy had taken the load of the book off his

shoulders. He did not even think to donate the usual complimentary copy to the university library. Even Baker, who had thrown himself into work and had steered clear of the department head since receiving his rebuke at their last meeting, received no copy.

On the 16th of June that stage ended. Ninheimer received a phone call and stared at the image in the 'plate with surprise.

"Speidell! Are you in town?"

"No, sir. I'm in Cleveland." Speidell's voice trembled with emotion.

"Then why the call?"

"Because I've just been looking through your new book! Ninheimer, are you mad? Have you gone insane?"

NINHEIMER stiffened. "Is something — uh — wrong?" he asked in alarm.

"Wrong? I refer you to page 562. What in blazes do you mean by interpreting my work as you do? Where in the paper cited do I make the claim that the criminal personality is non-existent and that it is the law-enforcement agencies that are the true criminals? Here, let me quote—"

"Wait! Wait!" cried Ninheimer, trying to find the page. "Let me see. Let me see . . . Good God!"

"Well?"

"Speidell, I don't see how this could have happened. I never wrote this."

"But that's what's printed! And that distortion isn't the worst. You look at page 690 and imagine what Ipatiev is going to do to you when he sees the hash you've made of his findings! Look, Ninheimer, the book is *riddled* with this sort of thing. I don't know what you were thinking of—but there's nothing to do but get the book off the market. And you'd better be prepared for extensive apologies at the next Association meeting!"

"Speidell, listen to me—"

But Speidell had flashed off with a force that had the 'plate glowing with after-images for fifteen seconds.

It was then that Ninheimer went through the book and began marking off passages with red ink.

He kept his temper remarkably well when he faced Easy again, but his lips were pale. He passed the book to Easy and said, "Will you read the marked passages on pages 562, 631, 664 and 690?"

Easy did so in four glances. "Yes, Professor Ninheimer."

"This is not as I had it in the original galleys."

"No, sir. It is not."

"Did you change it to read as it now does?"

"Yes, sir."

"Why?"

"Sir, the passages as they read in your version were most uncomplimentary to certain groups

of human beings. I felt it advisable to change the wording to avoid doing them harm."

"How dared you do such a thing?"

"The First Law, Professor, does not let me, through any inaction, allow harm to come to human beings. Certainly, considering your reputation in the world of sociology and the wide circulation your book would receive among scholars, considerable harm would come to a number of the human beings you speak of."

"But do you realize the harm that will come to me now?"

"It was necessary to choose the alternative with less harm."

Professor Ninheimer, shaking with fury, staggered away. It was clear to him that U. S. Robots would have to account to him for this.

THERE was some excitement at the defendants' table, which increased as Prosecution drove the point home.

"Then Robot EZ-27 informed you that the reason for its action was based on the First Law of Robotics?"

"That is correct, sir."

"That, in effect, it had no choice?"

"Yes, sir."

"It follows then that U. S. Robots designed a robot that would of necessity rewrite books to ac-

cord with its own conceptions of what was right. And yet they palmed it off as simple proofreading. Would you say that?"

Defense objected firmly at once, pointing out that the witness was being asked for a decision on a matter in which he had no competence. The judge admonished Prosecution in the usual terms, but there was no doubt that the exchange had sunk home—not least upon the attorney for the Defense.

Defense asked for a short recess before beginning cross-examination, using a legal technicality for the purpose that got him five minutes.

He leaned over toward Susan Calvin. "Is it possible, Dr. Calvin, that Professor Ninheimer is telling the truth and that Easy was motivated by the First Law?"

Calvin pressed her lips together, then said, "No. It isn't possible. The last part of Ninheimer's testimony is deliberate perjury. Easy is not designed to be able to judge matters at the stage of abstraction represented by an advanced textbook on sociology. It would never be able to tell that certain groups of humans would be harmed by a phrase in such a book. Its mind is simply not built for that."

"I suppose, though, that we can't prove this to a layman," said Defense pessimistically.

"No," admitted Calvin. "The proof would be highly complex.

Our way out is still what it was. We must prove Ninheimer is lying, and nothing he has said need change our plan of attack."

"Very well, Dr. Calvin," said Defense, "I must accept your word in this. We'll go on as planned."

In the courtroom, the judge's gavel rose and fell and Dr. Ninheimer took the stand once more. He smiled a little as one who feels his position to be impregnable and rather enjoys the prospect of countering a useless attack.

Defense approached warily and began softly. "Dr. Ninheimer, do you mean to say that you were completely unaware of these alleged changes in your manuscript until such time as Dr. Speidell called you on the 16th of June?"

"That is correct, sir."

"Did you never look at the galleys after Robot EZ-27 had proofread them?"

"At first I did, but it seemed to me a useless task. I relied on the claims of U. S. Robots. The absurd—uh—changes were made only in the last quarter of the book after the robot, I presume, had learned enough about sociology—"

"Never mind your presumptions!" said Defense. "I understood your colleague, Dr. Baker, saw the later galleys on at least one occasion. Do you remember testifying to that effect?"

"Yes, sir. As I said, he told me about seeing one page, and even

there, the robot had changed a word."

A GAIN Defense broke in. "Don't you find it strange, sir, that after over a year of implacable hostility to the robot, after having voted against it in the first place and having refused to put it to any use whatever, you suddenly decided to put your book, your magnum opus, into its hands?"

"I don't find that strange. I simply decided that I might as well use the machine."

"And you were so confident of Robot EZ-27—all of a sudden—that you didn't even bother to check your galleys?"

"I told you I was—uh—persuaded by U. S. Robots' propaganda."

"So persuaded that when your colleague, Dr. Baker, attempted to check on the robot, you berated him soundly?"

"I didn't berate him. I merely did not wish to have him—uh—waste his time. At least, I thought then it was a waste of time. I did not see the significance of that change in a word at the—"

Defense said with heavy sarcasm, "I have no doubt you were instructed to bring up that point in order that the word-change be entered in the record—" He altered his line to forestall objection and said, "The point is that you

were extremely angry with Dr. Baker."

"No, sir. Not angry."

"You didn't give him a copy of your book when you received it."

"Simple forgetfulness. I didn't give the library its copy, either." Ninheimer smiled cautiously. "Professors are notoriously absent-minded."

Defense said, "Do you find it strange that, after more than a year of perfect work, Robot EZ-27 should go wrong on your book? On a book, that is, which was written by you, who was, of all people, the most implacably hostile to the robot?"

"My book was the only sizable work dealing with mankind that it had to face. The Three Laws of Robotics took hold then."

"Several times, Dr. Ninheimer," said Defense, "you have tried to sound like an expert on robotics. Apparently you suddenly grew interested in robotics and took out books on the subject from the library. You testified to that effect, did you not?"

"One book, sir. That was the result of what seems to me to have been—uh—natural curiosity."

"And it enabled you to explain why the robot should, as you allege, have distorted your book?"

"Yes, sir."

"Very convenient. But are you sure your interest in robotics was not intended to enable you to

manipulate the robot for your own purposes?"

Ninheimer flushed. "Certainly not, sir!"

Defense's voice rose. "In fact, are you sure the alleged altered passages were not as you had them in the first place?"

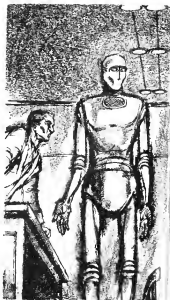
The sociologist half-rose. "That's — uh — uh — ridiculous! I have the galleys—"

He had difficulty speaking and Prosecution rose to insert smoothly, "With your permission, Your Honor, I intend to introduce as evidence the set of galleys given by Dr. Ninheimer to Robot EZ-27 and the set of galleys mailed by Robot EZ-27 to the publishers. I will do so now if my esteemed colleague so desires, and will be willing to allow a recess in order that the two sets of galleys may be compared."

DEFENSE waved his hand impatiently. "That is not necessary. My honored opponent can introduce those galleys whenever he chooses. I'm sure they will show whatever discrepancies are claimed by the plaintiff to exist. What I would like to know of the witness, however, is whether he also has in his possession Dr. Baker's galleys."

"Dr. Baker's galleys?" Ninheimer frowned. He was not yet quite master of himself.

"Yes, Professor! I mean Dr.



Baker's galleys. You testified to the effect that Dr. Baker had received a separate copy of the galleys. I will have the clerk read your testimony if you are suddenly a selective type of amnesiac. Or is it just that professors are, as you say, notoriously absent-minded?"



"Ninheimer said, 'I remember Dr. Baker's galleys. They weren't necessary once the job was placed in the care of the proofreading machine—'

"So you burned them?"

"No. I put them in the waste basket."

"Burned them, dumped them—

what's the difference? The point is you got rid of them."

"There's nothing wrong—" began Ninheimer weakly.

"Nothing wrong?" thundered Defense. "Nothing wrong except that there is now no way we can check to see if, on certain crucial galley sheets, you might not have

substituted a harmless blank one from Dr. Baker's copy for a sheet in your own copy which you had deliberately mangled in such a way as to force the robot to—"

Prosecution shouted a furious objection. Justice Shane leaned forward, his round face doing its best to assume an expression of anger equivalent to the intensity of the emotion felt by the man.

The judge said, "Do you have any evidence, Counselor, for the extraordinary statement you have just made?"

Defense said quietly, "No direct evidence, Your Honor. But I would like to point out that, viewed properly, the sudden conversion of the plaintiff from anti-roboticism, his sudden interest in robotics, his refusal to check the galleys or to allow anyone else to check them, his careful neglect to allow anyone to see the book immediately after publication, all very clearly point—"

"Counselor," interrupted the judge impatiently, "this is not the place for esoteric deductions. The plaintiff is not on trial. Neither are you prosecuting him. I forbid this line of attack and I can only point out that the desperation that must have induced you to do this cannot help but weaken your case. If you have legitimate questions to ask, Counselor, you may continue with your cross-examination. But I warn you against another such

exhibition in this courtroom."

"I have no further questions, Your Honor."

Robertson whispered heatedly as counsel for the Defense returned to his table, "What good did that do, for God's sake? The judge is dead-set against you now."

Defense replied calmly, "But Ninheimer is good and rattled. And we've set him up for tomorrow's move. He'll be ripe."

Susan Calvin nodded gravely.

THE rest of Prosecution's case was mild in comparison. Dr. Baker was called and bore out most of Ninheimer's testimony. Drs. Speidell and Ipatiev were called, and they expounded most movingly on their shock and dismay at certain quoted passages in Dr. Ninheimer's book. Both gave their professional opinion that Dr. Ninheimer's professional reputation had been seriously impaired.

The galleys were introduced in evidence, as were copies of the finished book.

Defense cross-examined no more that day. Prosecution rested and the trial was recessed till the next morning.

Defense made his first motion at the beginning of the proceedings on the second day. He requested that Robot EZ-27 be admitted as a spectator to the proceedings.

Prosecution objected at once

and Justice Shane called both to the bench.

Prosecution said hotly, "This is obviously illegal. A robot may not be in any edifice used by the general public."

"This courtroom," pointed out Defense, "is closed to all but those having an immediate connection with the case."

"A large machine of known erratic behavior would disturb my clients and my witnesses by its very presence! It would make hash out of the proceedings."

The judge seemed inclined to agree. He turned to Defense and said rather unsympathetically, "What are the reasons for your request?"

Defense said, "It will be our contention that Robot EZ-27 could not possibly, by the nature of its construction, have behaved as it has been described as behaving. It will be necessary to present a few demonstrations."

Prosecution said, "I don't see the point, Your Honor. Demonstrations conducted by men employed at U. S. Robots are worth little as evidence when U. S. Robots is the defendant."

"Your Honor," said Defense, "the validity of any evidence is for you to decide, not for the Prosecuting Attorney. At least, that is my understanding."

Justice Shane, his prerogatives encroached upon, said, "Your un-

derstanding is correct. Nevertheless, the presence of a robot here does raise important legal questions."

"Surely, Your Honor, nothing that should be allowed to override the requirements of justice. If the robot is not present, we are prevented from presenting our only defense."

The judge considered. "There would be the question of transporting the robot here."

"That is a problem with which U. S. Robots has frequently been faced. We have a truck parked outside the courtroom, constructed according to the laws governing the transportation of robots. Robot EZ-27 is in a packing case inside with two men guarding it. The doors to the truck are properly secured and all other necessary precautions have been taken."

"You seem certain," said Justice Shane, in renewed ill-temper, "that judgment on this point will be in your favor."

"Not at all, Your Honor. If it is not, we simply turn the truck about. I have made no presumptions concerning your decision."

The judge nodded. "The request on the part of the Defense is granted."

The crate was carried in on a large dolly and the two men who handled it opened it. The courtroom was immersed in a dead silence.

SUSAN Calvin waited as the thick slabs of celluform went down, then held out one hand. "Come, Easy."

The robot looked in her direction and held out its large metal arm. It towered over her by two feet but followed meekly, like a child in the clasp of its mother. Someone giggled nervously and choked it off at a hard glare from Dr. Calvin.

Easy seated itself carefully in a large chair brought by the bailiff, which creaked but held.

Defense said, "When it becomes necessary, Your Honor, we will prove that this is actually Robot EZ-27, the specific robot in the employ of Northeastern University during the period of time with which we are concerned."

"Good," His Honor said. "That will be necessary. I, for one, have no idea how you can tell one robot from another."

"And now," said Defense, "I would like to call my first witness to the stand. Professor Simon Ninheimer, please."

The clerk hesitated, looked at the judge. Justice Shane asked, with visible surprise, "You are calling the *plaintiff* as your witness?"

"Yes, Your Honor."

"I hope that you're aware that as long as he's your witness, you will be allowed none of the latitude you might exercise if you

were cross-examining an opposing witness."

Defense said smoothly, "My only purpose in all this is to arrive at the truth. It will not be necessary to do more than ask a few polite questions."

"Well," said the judge dubiously, "you're the one handling the case. Call the witness."

Ninheimer took the stand and was informed that he was still under oath. He looked more nervous than he had the day before, almost apprehensive.

But Defense looked at him benignly.

"Now, Professor Ninheimer, you are suing my clients in the amount of \$750,000."

"That is the—uh—sum. Yes."

"That is a great deal of money."

"I have suffered a great deal of harm."

"Surely not that much. The material in question involves only a few passages in a book. Perhaps these were unfortunate passages, but after all, books sometimes appear with curious mistakes in them."

Ninheimer's nostrils flared. "Sir, this book was to have been the climax of my professional career! Instead, it makes me look like an incompetent scholar, a perverter of the views held by my honored friends and associates, and a believer of ridiculous and—uh—outmoded viewpoints. My reputation

is irretrievably shattered! I can never hold up my head in any—uh—assemblage of scholars, regardless of the outcome of this trial. I certainly cannot continue in my career, which has been the whole of my life. The very purpose of my life has been—uh—aborted and destroyed.”

Defense made no attempt to interrupt the speech, but stared abstractedly at his fingernails as it went on.

He said very soothingly, “But surely, Professor Ninheimer, at your present age, you could not hope to earn more than—let us be generous—\$150,000 during the remainder of your life. Yet you are asking the court to award you five times as much.”

NINHEIMER said, with an even greater burst of emotion, “It is not in my lifetime alone that I am ruined. I do not know for how many generations I shall be pointed at by sociologists as a—uh—a fool or maniac. My real achievements will be buried and ignored. I am ruined not only until the day of my death, but for all time to come, because there will always be people who will not believe that a robot made those insertions—”

It was at this point that Robot EZ-27 rose to his feet. Susan Calvin made no move to stop him. She sat motionless, staring straight

ahead. Defense sighed softly.

Easy's melodious voice carried clearly. It said, “I would like to explain to everyone that I did insert certain passages in the galley proofs that seemed directly opposed to what had been there at first—”

Even the Prosecuting Attorney was too startled at the spectacle of a seven-foot robot rising to address the court to be able to demand the stopping of what was obviously a most irregular procedure.

When he could collect his wits, it was too late. For Ninheimer rose in the witness chair, his face working.

He shouted wildly, “Damn you, you were instructed to keep your mouth shut about—”

He ground to a choking halt, and Easy was silent, too.

Prosecution was on his feet now, demanding that a mistrial be declared.

Justice Shane banged his gavel desperately. “Silence! Silence! Certainly there is every reason here to declare a mistrial, except that in the interests of justice I would like to have Professor Ninheimer complete his statement. I distinctly heard him say to the robot that the robot had been instructed to keep its mouth shut about something. There was no mention in your testimony, Professor Ninheimer, as to any instructions to the

robot to keep silent about anything?"

Ninheimer stared wordlessly at the judge.

Justice Shane said, "Did you instruct Robot EZ-27 to keep silent about something? And if so, about what?"

"Your Honor—" began Ninheimer hoarsely, and couldn't continue.

The judge's voice grew sharp. "Did you, in fact, order the inserts in question to be made in the galleys and then order the robot to keep quiet about your part in this?"

Prosecution objected vigorously, but Ninheimer shouted, "Oh, what's the use? Yes! Yes!" And he ran from the witness stand. He was stopped at the door by the bailiff and sank hopelessly into one of the last rows of seats, head buried in both hands.

Justice Shane said, "It is evident to me that Robot EZ-27 was brought here as a trick. Except for the fact that the trick served to prevent a serious miscarriage of justice, I would certainly hold attorney for the Defense in contempt. It is clear now, beyond any doubt, that the plaintiff has committed what is to me a completely inexplicable fraud since, apparently, he was knowingly ruining his career in the process—"

Judgment, of course, was for the defendant.

DR. Susan Calvin had herself announced at Dr. Ninheimer's bachelor quarters in University Hall. The young engineer who had driven the car offered to go up with her, but she looked at him scornfully.

"Do you think he'll assault me? Wait down here."

Ninheimer was in no mood to assault anyone. He was packing, wasting no time, anxious to be away before the adverse conclusion of the trial became general knowledge.

He looked at Calvin with a queerly defiant air and said, "Are you coming to warn me of a counter-suit? If so, it will get you nothing. I have no money, no job, no future. I can't even meet the costs of the trial."

"If you're looking for sympathy," said Calvin coldly, "don't look for it here. This was your doing. However, there will be no counter-suit, neither of you nor of the university. We will even do what we can to keep you from going to prison for perjury. We aren't vindictive."

"Oh, is that why I'm not already in custody for forswearing myself? I had wondered. But then," he added bitterly, "why should you be vindictive? You have what you want now."

"Some of what we want, yes," said Calvin. "The university will keep Easy in its employ at a considerably higher rental fee. Fur-

thermore, certain underground publicity concerning the trial will make it possible to place a few more of the EZ models in other institutions without danger of a repetition of this trouble."

"Then why have you come to see me?"

"Because I don't have all of what I want yet. I want to know why you hate robots as you do. Even if you had won the case, your reputation would have been ruined. The money you might have obtained could not have compensated for that. Would the satisfaction of your hatred for robots have done so?"

"Are you interested in human minds, Dr. Calvin?" asked Ninheimer, with acid mockery.

"Insofar as their reactions concern the welfare of robots, yes. For that reason, I have learned a little of human psychology."

"Enough of it to be able to trick me!"

"That wasn't hard," said Calvin, without pomposity. "The difficult thing was doing it in such a way as not to damage Easy."

"It is like you to be more concerned for a machine than for a man." He looked at her with savage contempt.

It left her unmoved. "It merely seems so, Professor Ninheimer. It is only by being concerned for robots that one can truly be concerned for twenty-first-century

Man. You would understand this if you were a roboticist."

"I have read enough robotics to know I don't want to be a roboticist!"

"Pardon me, you have read a book on robotics. It has taught you nothing. You learned enough to know that you could order a robot to do many things, even to falsify a book, if you went about it properly. You learned enough to know that you could not order him to forget something entirely without risking detection, but you thought you could order him into simple silence more safely. You were wrong."

"You guessed the truth from his silence?"

"It wasn't guessing. You were an amateur and didn't know enough to cover your tracks completely. My only problem was to prove the matter to the judge and you were kind enough to help us there, in your ignorance of the robotics you claim to despise."

"IS there any purpose in this discussion?" asked Ninheimer wearily.

"For me, yes," said Susan Calvin, "because I want you to understand how completely you have misjudged robots. You silenced Easy by telling him that if he told anyone about your own distortion of the book, you would lose your job. That set up a certain poten-

tial within Easy toward silence, one that was strong enough to resist our efforts to break it down. We would have damaged the brain if we had persisted.

"On the witness stand, however, you yourself put up a higher counter-potential. You said that because people would think that you, not a robot, had written the disputed passages in the book, you would lose far more than just your job. You would lose your reputation, your standing, your respect, your reason for living. You would lose the memory of you after death. A new and higher potential was set up by you—and Easy talked."

"Oh, God," said Ninheimer, turning his head away.

Calvin was inexorable. She said, "Do you understand *why* he talked? It was not to accuse you, but to *defend* you! It can be mathematically shown that he was about to assume full blame for your crime, to deny that you had anything to do with it. The First Law required that. He was going to lie—to damage himself—to bring monetary harm to a corporation. All that meant less to him than did the saving of you. If you really understood robots and robotics, you would have let him talk. But you did not understand, as I was sure you wouldn't, as I guaranteed to the defense attorney that you wouldn't. You were certain,

in your hatred of robots, that Easy would act as a human being would act and defend itself at your expense. So you flared out at him in panic—and destroyed yourself."

Ninheimer said with feeling, "I hope some day your robots turn on you and kill you!"

"Don't be foolish," said Calvin. "Now I want you to explain why you've done all this."

Ninheimer grinned a distorted, humorless grin. "I am to dissect my mind, am I, for your intellectual curiosity, in return for immunity from a charge of perjury?"

"Put it that way if you like," said Calvin emotionlessly. "But explain."

"So that you can counter future anti-robot attempts more efficiently? With greater understanding?"

"I accept that."

"You know," said Ninheimer, "I'll tell you—just to watch it do you no good at all. You can't understand human motivation. You can only understand your damned machines because you're a machine yourself, with skin on."

He was breathing hard and there was no hesitation in his speech, no searching for precision. It was as though he had no further use for precision.

He said, "For two hundred and fifty years, the machine has been replacing Man and destroying the craftsman. Pottery is spewed

out of molds and presses. Works of art have been replaced by identical gimcracks stamped out on a die. Call it progress, if you wish! The artist is restricted to abstractions, confined to the world of ideas. He must design something in mind—and then the machine does the rest.

"Do you suppose the potter is content with mental creation? Do you suppose the idea is enough? That there is nothing in the feel of the clay itself, in watching the thing grow as hand and mind work together? Do you suppose the actual growth doesn't act as a feedback to modify and improve the idea?"

"You are not a potter," said Dr. Calvin.

"I am a creative artist! I design and build articles and books. There is more to it than the mere thinking of words and of putting them in the right order. If that were all, there would be no pleasure in it, no return.

"A book should take shape in the hands of the writer. One must actually see the chapters grow and develop. One must work and rework and watch the changes take place beyond the original concept even. There is taking the galleys in hand and seeing how the sentences look in print and molding them again. There are a hundred contacts between a man and his

work at every stage of the game—and the contact itself is pleasurable and repays a man for the work he puts into his creation more than anything else could. Your robot would take all that away."

"So does a typewriter. So does a printing press. Do you propose to return to the hand-illumination of manuscripts?"

"Typewriters and printing presses take away some, but your robot would deprive us of all. Your robot takes over the galleys. Soon it, or other robots, would take over the original writing, the searching of the sources, the checking and cross-checking of passages, perhaps even the deduction of conclusions. What would that leave the scholar? One thing only—the barren decisions concerning what orders to give the robot next! I want to save the future generations of the world of scholarship from such a final hell. That meant more to me than even my own reputation and so I set out to destroy U. S. Robots by whatever means."

"You were bound to fail," said Susan Calvin.

"I was bound to try," said Simon Ninheimer.

Calvin turned and left. She did her best to feel no pang of sympathy for the broken man.

She did not entirely succeed.

—ISAAC ASIMOV

SANCTUARY

By WILLIAM TENN

*Can't judge if a man is a fiend
or a martyr? Put him to this test
—time travel wounds all heels!*

Illustrated by MARTINEZ

THE cry was in a deep voice, a breathless, badly frightened voice. Hoarse and urgent, it rose above the roar of the distant mob, above the rattle of traffic; it flung itself into the spacious office on the third floor of the Embassy and demanded immediate attention.

His Excellency, the Ambassador from 2219 A.D.—the sole occupant of that office—was a man of relaxed bearing and a wonderfully calm face. His eyes transmitted the unvarying message that all things were essentially simple—and could

be further simplified. It was, therefore, quite remarkable how that cry from the grounds below made him look suddenly uncertain.

He rose and moved to the window with unaccustomed haste. A tall, bearded man, whose clothes were torn and whose body was badly bruised, had just leaped onto the Embassy lawn from the surrounding high fence. The bearded man pointed the forefingers of both hands at the third-floor office of the Ambassador from 2219 A.D. and shrieked again:

"Sanctuary!"

There was an answering shriek from the mob cascading down the street toward him. The bearded man looked over his shoulder once, then leaped forward across the lawn. His feet could be heard pounding up the steps of the Embassy. Downstairs, a heavy door slammed behind him.

The Ambassador from 2219 A.D. bit his lip. Well, the fellow had made it. Now his problems began.

He turned a dial on his wrist communicator. "All Embassy personnel," he said. "Attention! This is the Ambassador speaking. Bolt and barricade all street doors immediately! Barricade all windows on the street level that are not protected by bars. All female personnel and the fugitive who has just entered will be sent up to the second floor. Havemeyer, take charge of the first floor. Bruce, take charge of the second floor—and keep the fugitive under careful guard. Dodson, report to me."

HE turned the dial another notch. "Police Department? This is the Ambassador from 2219 A.D. A fugitive has just entered the building, requesting sanctuary. From the looks of the mob behind him, I'd say that your normal detail down here will be inadequate to protect us. You will have to send reinforcements."

The policeman's snort was as

much anger as surprise. "You're giving sanctuary to Henry Gropus and you want us to protect you? Listen, I live in this time! It's as much as my life is worth to—"

"It's as much as your job is worth if a riot detail isn't down here in two minutes. Two minutes, I said. It is now precisely twenty-seven minutes past six o'clock."

"But listen!" The voice from the dial seemed almost hysterical. "That's Henry Groppus you have in there. Do you know what he *did*?"

"At the moment, that's not relevant. If his request for asylum isn't honored, he will be returned to the proper authorities. I am asking protection for the Embassy from 2219 A.D., for its property and personnel, which, like all Embassies and their staffs, enjoy extraterritorial status and immunity. It's your responsibility to see that we get it."

The Ambassador clicked off and drew a deep breath. His calm was returning and once more his eyes announced that all complex matters could be refined down to simple ones—and handled.

As he turned to the window again, Dodson, his First Secretary, came in and stood respectfully at his shoulder.

Together, they stared down at the mob, the relaxed, observant older man and the slender, alert young one who split his gaze be-

tween the scene below and his chief.

As far as the eye could see, in all directions, the street was the color of the yelling mob. It had pushed right up against the fence, so hard and so tight that those in front were unable to climb it as they had intended, but were jammed, screaming their agony, into the iron bars.

"The police detail on duty, sir," Dodson said in a low voice. "They weren't able to hold them back for more than a few seconds. But they gave us time we needed. Everything downstairs should be secure, sir."

The Ambassador grunted.

Now the fence was giving way. It bent slowly, steadily inward, like a black flower closing. And then it was down here and the mob spilled over it, down there and a thick wave of mob washed across the lawn, down everywhere, mob over it everywhere, mob rushing toward the building in which they stood, mob maddened and swirling all about them and breaking thunderously against the walls.

FOR just a moment, Dodson was looking contemptuously down through the window. "2119 A.D.!"

The Ambassador grunted again. The grunt could be taken any one of several ways.

The frenzied, directionless noise from below abruptly changed in

quality. It became steady, rhythmical. At the peak of each pulsation, there was an enormous thump. After a while, the thumps were followed by a ripping sound.

"Sir!" Havemeyer's voice came in suddenly on the wrist communicator. "The front door's beginning to give way. All right if we move up to the second floor?"

"By all means. And as soon as you're up there, you and Bruce see to it that the doors, front and rear, are barricaded. Then I want you to stand by the destructive fuses on the Embassy files. If the mob breaks into the second floor, see to it that the files go."

"Right, sir."

"Do you think, sir, that there's any chance—" Dodson had begun, when the sound of a dozen sirens made them look up.

The riot squad was coming down from the sky on flying platforms, two men to a platform. Soupy yellow stuff flowed out of the nozzles of the canisters each policeman carried, flowed out and bubbled into the mob.

The Ambassador looked at his watch. "One minute and fifty seconds," he said comfortably. Then he went back to his desk.

Dodson stood at the window, watching the mob stumble back across the Embassy lawn in chokes and gasps. Above all, he was fascinated by the number of individuals who, in the midst of their choking,

stopped and turned and shook their fists at the building behind them.

When he could tear himself away, he described them to his chief.

"They evidently feel pretty strongly, sir," he suggested. "This is no ordinary mob."

"No, it's no ordinary mob. And Groppus is no ordinary criminal. Send him in. Tell Havemeyer and Bruce to start straightening up the place. I want an itemized statement on all damage to be forwarded to the Secretary of State before five o'clock."

"Yes, sir." Dodson paused near the door. "You know, sir, the staff received him inside as something of a hero."

The Ambassador looked up, his calm eyes slightly intent. "Of course they did. How did you feel about him, Dodson—criminal or hero?"

The secretary's face went immediately blank as his burgeoning diplomat's mind tried to blunt the question. "Well, of course, sir, he's both—both criminal and hero."

"Yes, but which is he chiefly? Take a stand, Dodson. How did you feel about him? Off the record, naturally."

"Well, sir," the young man began, then hesitated. "I think the dictum that applies here is *When in Rome . . .* We are, in effect, in Rome. Therefore, Henry Groppus

should undoubtedly be considered a criminal."

"Yes," the Ambassador said thoughtfully. "In Rome. All right, send him in, send him in."

DODSON left. The Ambassador sat back and stared at the ceiling—calmly. Then he got up and paced back and forth across the office—calmly. Then he went back to his desk, opened a heavy, gray-bound book, skimmed through a few pages in it and finally leaned forward, drumming his fingers on the polished desktop—calmly, very calmly.

His wrist communicator buzzed. He flipped it on.

"Your Excellency, this is the Secretary of State," said a formal, moistureless voice.

"Good afternoon, Mr. Secretary," said the Ambassador, with equal formality. "What can I do for you?"

"Your Excellency, according to information just received by my office, a certain Henry Hancock Groppus has escaped from the jail cell in which he was awaiting execution and taken shelter in your Embassy. I must ask you if this is true."

"That is true, Mr. Secretary, except for one small detail. At the time he entered the Embassy, he was not being pursued by lawfully constituted authority, but by an unlawful and ungoverned mob."

The voice in the communicator coughed an extremely dry cough. "I cannot regard this detail as being relevant, Your Excellency. In the name of the government of the United States of America of 2119 A.D.—to which government you are accredited and whose laws you are bound to respect—I must ask you to surrender the person of Henry Hancock Groppus, convicted felon, to the justice of his country and his time."

"And I, Mr. Secretary," the Ambassador replied with equal dry urbanity, "as a representative and servant of United Earth of 2219 A.D., must respectfully decline until I have had time to study the situation."

"In that case, Your Excellency, I regret to have to inform you of the extreme displeasure of my government and our determination to take whatever steps are necessary to secure the person of Henry Hancock Groppus."

"Noted, Mr. Secretary," said the Ambassador.

There was a silence. "May I speak to you on the private channel, Your Excellency?"

"You may, Mr. Secretary. One moment, please."

The Ambassador from 2219 A.D. pressed a button on his desk which locked his door and lit a *Do Not Disturb* indicator. Then he swung around and switched on the big screen behind his desk.

A HEAVY-SET balding man appeared on it. "Hi, Don," he said. "This is one big stink we're in."

"I know, Cleve," the Ambassador sighed. "A bigamy case. Capital offense."

"Bigamy, hell! Polygamy, Don boy! That's what this joker's been convicted of, *polygamy*. Advocating, abetting and encompassing polygamy. You just don't go any lower."

"In your time, you mean. In 2199."

"In our time, yes. That's the time we're living in right now. The time that has to face the problem of one woman to every ten men because of the genetic imbalance created by the last world war. All right, so we haven't licked the Uterine Plague yet. We won't lick it for another fifty years, according to you, though you won't tell our medics how we finally will solve it."

The Ambassador gestured wearily at the screen. "You know as well as I, Cleve, there are things that Temporal Embassies can do and there are things they can't do."

"Okay. Good. No argument. You boys take your orders and have your problems. But we've got problems, too. Gigantic ones. We've got a social code that was designed in the days when there were equal numbers of men and women, and

it's splitting at the seams everywhere. We've got to persuade hundreds of millions of normal men that it's right and proper for them to lead lives of the most maddening frustration if we want to keep civilization from dissolving into hand-to-hand battles. We've got them persuaded—about as well persuaded as a herd of rutting elephants. And along comes this Henry Groppus and his handful of crackpot Mendelists, making strange, sudden noises in the rear of the herd and—"

"Slow down, Cleve. Take a deep breath. I know the kind of problems your time is facing, perhaps better than you. I know it from the history I studied in school, and, since I've arrived here in 2119 as Ambassador from the Next Century, I've seen it sharp and bloodily clear, at first hand. I know what an explosive danger the Mendelist philosophy is. I couldn't be more sympathetic, I assure you.

"Nonetheless, Cleve, you're an important government official; you're not the man in the street. 2119 is grappling with the social effects of the Uterine Plague, and to 2119 it looks like the biggest thing that ever was. But 2119 is just a drop in the historical bucket. And so, for that matter," he added in all fairness, "is 2219, my own period. Be just to your position and your intellect; look at the thing in perspective."

THE Secretary of State made a sluicing motion at the top of his bald head. "What perspective? How perspective?"

"Simply this, as an example. Take an Englishman of the upper middle class, a rich merchant, let us say. In the time of the Tudors, he'd be all for increasing the powers of the king, all for an absolute monarchy, all for a very strong central government—the things that would damage his superiors, the feudal nobility, the most. A century later, when the nobility had been pretty much reduced to so much court decoration, his great-great-grandson would be fighting the absolutism of the Stuarts tooth and nail, insisting that the people had a right to call their king to account and that any government which was dictatorial deserved to be overthrown.

"And a hundred years or so after that, under the Hanoverian George, III, his great-great-grandson, looking across the channel to France, observing that the very common people there in the course of taking the same drastic action with *their* king had completely bollixed up industry, banking and commerce—he would be exclaiming his pious horror over regicides and calling for laws that would strengthen the government and keep revolutionaries in their place."

"The point being," said the Secretary of State, "that most social



values are conditioned by the time, place and prevailing political climate. Is that what you mean by perspective?"

"Exactly," the Ambassador said.

The bald-headed man stared angrily out of the screen. "I wish I weren't so upset. It's my misfortune to forget every dirty word I know when I get really mad. And this calls for—Look, Don, I don't know very much about 2219, what's important, what's sacred, what's not to be touched. The rules of your outfit forbid you to give us a very clear picture of your time—and you're a close-mouthed character to begin with. But I'd give the goddam front lobe of my brain to see how you'd behave if some Henry Groppus of the twenty-third century did the future equivalent of polygamy in your neck of the woods.

"You'd perspective him, you would. Now I'm not going to beat about the bush any more. Enough history, enough philosophy. Our government wouldn't last a week if we let Mendelists get away with preaching their vicious nonsense, let alone committing overt acts. I hate to have to put it this way, Don, but the man is the vilest of criminals. You're going to hand him over to us."

SMILING calmly, the Ambassador from 2219 A.D. said, "I repeat: he's a criminal in your terms.

Beyond that, I repeat: I have to study the situation. He had escaped from prison; he was being pursued by a lynch mob; he took asylum in our Embassy, which is legally an enclave of 2219 in the present-day United States, an extension of our time and government into yours. Don't talk to me as if I were your office boy's assistant, Cleve."

"A criminal is a criminal," the bald-headed man went on doggedly. "This criminal has got to be brought to justice. I've asked you for him on the record and off the record. Next step is formal extradition papers. And the step after that—well, I won't like to do it, but I will."

"I wouldn't like you to do it, either," said the Ambassador calmly and softly.

Their eyes locked. The Secretary of State spread his hands. "Well, there it is," he muttered, and he clicked off.

Dodson and Groppus had been waiting patiently outside. When the Ambassador unlocked the door and nodded them in, he looked the bearded man over carefully.

A thoroughly bewhiskered, messily eyebrowed and well-muscled person, perhaps a jot past middle age, he stood clumsily tall and stiffly erect in a manner slightly reminiscent of a military cadet who had arrived at the academy just the evening before.

His eyes were mild and apologetic, not at all fanatic and intense. They had a tendency to blink if you stared at them too hard. His hands were the most vibrant part of him. Even in comparative repose, when he was listening or thinking, they kept going through the repertoire of fluid, underlining gestures of the practiced sidewalk exhorter.

"I suppose you know, Mr. Groppus, that you are already the subject of a rather acrimonious controversy between your government and my Embassy?" said the Ambassador.

"Not my government. I don't recognize it as mine. I don't admit its jurisdiction over me."

"Unfortunately, it feels differently. And it is larger, more powerful and more numerous than you. Please sit down."

Henry Groppus lowered his head and shook it from side to side slowly, a negative gesture that could make its point the entire length of a meeting hall. "I prefer to stand, thank you. I always stand. Size, power, numbers—since the beginning of time, those three have been trying to correlate with right and wrong. So far, they haven't succeeded."

NODDING, the Ambassador murmured, "Very true. But, on the other hand, they do exceedingly well with life and death. Which,

of course, brings us back to the present moment and you. As a convicted criminal under sentence of—"

"I am not a criminal."

"You aren't? In that case, Mr. Groppus, we have all been misled. I really must beg your pardon. Suppose you tell me then: how, precisely, do you visualize your role?"

"As a political refugee! I come here, persecuted and cast out, to my true home and nation. I claim spiritual citizenship in 2219."

"Spiritual citizenship? That's hardly the best kind. But putting that complex question aside for the moment, let me ask you, Mr. Groppus: what has given you the impression that my era shares your beliefs? The first rule of all Temporal Embassies is to transmit no information about the technological status and social attitudes of their own time to the period in which they are accredited. I fail to see what basis you have for—"

"I always suspected that the future would be Mendelist, but I couldn't be really sure. When the mob broke into the jail to lynch me and I got away from them, this was the only place I could think of hiding in. Now that I've been here for a while and seen you people—I know! The next century belongs to us!"

The Ambassador looked completely startled and unbelieving, as

if he'd stubbed an emotion on a projecting rock. He shot a quick, questioning glance at his First Secretary.

"I'm sorry, sir," Dodson said in a low, rapid voice. "Bruce. It was his fault. He was so busy barricading the second floor against the mob that he neglected to take proper precautions. Some of the clerks came up to the prisoner during the excitement and got into conversation with him. By the time I reached him, the damage had been done."

"Some of the clerks—" His Excellency fought with himself for a moment, then squirted out an immense, protective cloud of calm. He said, after a deep breath, "I was under the impression that my staff was composed of trained employees, regularly briefed as to their responsibilities. Well trained. Down to the very lowest echelons."

"Yes, sir, but these were three youngsters on their first extra-temporal assignment. I'm not trying to make excuses for them, but it's been very dull at the Embassy these last few months, especially for romantic kids who came out all hot and bothered at the idea of seeing history come alive and happen. And then, all of a sudden, there's a lynch mob and a siege of the Embassy. They find themselves standing next to an actual twenty-second-century Mendelist Martyr in the flesh. Well, you

know how it is, sir. They started out by asking excited, admiring questions—and ended up answering them."

THE Ambassador nodded gravely. "Groppus is the man to do just that. But after this affair has been cleared up, Vice-Consul Bruce and those three clerks will be the subject of an investigation and a report through Temporal Embassy channels clear to the end of the line."

Groppus, meanwhile, had wound himself up and was now running strong.

"It had to be! It had to be!" he chanted, pacing up and down the office, his torn clothes whipping in the breeze created by his gesticulating hands. "We carried the word to the people and told them it had to be. If the Uterine Plague means that nine-tenths of all female children are still-born, does it follow that the remaining precious tenth should marry at random? No, we said. Such a thought stinks in the nostrils of evolution!

"It's not enough to require every prospective husband to show a certificate of fecundity. We must go further! We must march under the slogan of a maximum genetic potential in every marriage. After all, we are not living in the darkness of the twentieth and twenty-first centuries! With modern eugenic methods, we can know

exactly what we are getting in every fetus conceived. But even *that* is not enough. We must—"

"All right," said the Ambassador from 2219 A.D. wearily, dropping into his chair and frowning at the desktop. "I am quite familiar with the sentiments. I had them drummed into me all through childhood, and I had to memorize and repeat them all through my adolescence."

"Even *that* is not enough!" repeated the bearded man, his voice rising majestically. "We must go further yet, we told them. We must turn a curse into a blessing, the Uterine Plague into a true genetic revival! If only the best should be allowed to reproduce, why not the *best* of the best? And if only the best of the best—if only the smallest, most refined nugget of mankind is to be allowed the privileges of further heredity—" here his voice sank to a dramatic whisper, before suddenly soaring up again—"surely we will not presume to impose the ancient, outworn limitation of one woman, one wife, one mate at a time?"

"Surely the race—stumbling and floundering in a deadly biological morass—deserves more than this mote, this snippet of aid? Doesn't the next, the smaller generation, deserve the best of the previous, the larger generation, whatever custom may whine and morality may squeak to the contrary? We

don't preach sexual monopoly: we preach sexual salvation! And I say to you—"

"Oh, Dodson, please take him out!" the Ambassador begged. "I have to think, and these grammar school recitations are giving me a headache!"

AT the door, Groppus abruptly slid from his dizzy forensic heights and landed springily on his feet. "So you won't allow them to extradite me, Your Excellency? You won't relinquish me to the justice of these primitives?"

"I haven't decided one way or the other. There's more at stake than your person. I have to consider the matter carefully."

"Consider? Are you for light or for darkness? Are you for the future or the past? What is there to consider? I am a spiritual citizen, a philosophical forefather of 2219 A.D. I have the *right* to sanctuary here—I *demand* that you give me asylum!"

The Ambassador stared at him calmly. "Neither spiritual citizenship nor philosophical forebears are included in the category of duties for which I am responsible. And I would like to point out to you, Mr. Groppus, that under international law—from which the body of extra-temporal law is derived—a fugitive's rights of asylum are never implicit, but are dependent entirely upon the determina-

tion of the state to which he flees or the embassy of refuge in each *separate case*."

Dodson closed the door on the bearded man's dawning expression of consternation.

When he returned, having deposited Groppus with guards who were going to be very self-consciously uncommunicative, the Ambassador told him of the threat contained in the Secretary of State's last comment.

The young man swallowed. "That seems to imply that—that shortly after we're served with extradition papers, sir, a forcible entry of the Embassy will be made in order to remove the prisoner. But that's unheard of!"

"It may be the sort of thing that isn't talked about much, but it certainly isn't unheard of. It would mean, of course, that the Temporal Embassy would be permanently withdrawn from the United States of this era."

"Would they risk *that*, sir? After all, it's their link with the future! We can't give them all the information they want, but we do give them whatever knowledge the Temporal Embassies in our own time say is safe. And we take nothing in return. It would be idiotic for them to break relations."

The Ambassador studied a page in the gray-bound book on his desk.

"Nothing which *must* be done is

idiotic," he said, largely to himself. "Precedent after precedent. A matter of finding the right kind of spurious legality in which to cloak such action. And who is to say what is spurious or not about the reasons a sovereign state gives for taking drastic measures, if it believes that the measures are essential to its survival? A case like this, so intricately involved with mass frustration and the most basic problems of individual male egos . . ."

DODSON was watching him closely. "So we give up the fugitive? I thought we would have to from the very beginning, if you'll pardon me for saying so, sir. He is a criminal, no doubt about it. But it is going to be an uncomfortable business, very much like turning in a forefather, at that. He thinks so much like us."

The young man rubbed a hand reflectively against a clean-shaven chin. "Even looks like us—I mean the way we looked back home in 2219, before we were anachronised for the Embassy in this period. It's amazing in how many petty and minor ways, as well as large and important ones, Groppus has anticipated our age."

His Excellency stood up and stretched at great length. "Nonsense, Dodson, nonsense! Don't confuse cause with effect and real history with dramatic personalities.

Henry Groppus didn't grow whiskers because he envisioned the possibility that every man in our time will—that's not the way it works at all. We go about bearded because our entire civilization is based on the Genetic File. And the concept of the Genetic File had its roots among the ideas of the twenty-second-century Mendelists—a mal-adjusted anti-social bunch who wore whiskers in a non-whiskered time as part of their general protest.

"Put the utopian babblings of Henry Groppus up against the hard, workaday facts of the Genetic File in our age—do you see any real correspondence? Here and there, clumsily—as in Groppus advocating compulsory polygamy for genetic aristocrats, and in our society allowing an occasional, gifted man, under special circumstances, to take more than one wife. The sad truth about political saints of any given past is that nobody but a scholar will take the trouble to read their complete works and try to see them whole. But all this to one side: the Mendelists are political saints in our time and we can't turn one of them in."

"I'm afraid I don't follow you, sir," Dodson objected. "You said just a moment ago that the present-day United States government felt so strongly about this matter that it was prepared to recover

fugitives by force, even at the cost of breaking diplomatic relations with our time. Well, sir? And then there's paragraph 16a of the Temporal Embassy By-laws: '*. . . and above all the duty of respecting the laws, the customs and the mores peculiar to the time in which an Embassy is accredited and of giving no offense whatsoever thereto.*'"

The Ambassador from 2219 A.D. began emptying his desk, explaining gently over his shoulder: "By-laws are one thing, Dodson. Natural laws are another. And the first and most fundamental natural law of a public servant is this: don't bite the hand that feeds you. Don't offend the sensibilities of the government officials who employ you. And above all, don't offend the sensibilities of the public who employs them. If I turned Groppus in, I would receive the heartfelt appreciation of this period—and never get another diplomatic appointment from 2219 A.D. That's the basis on which I finally made my decision.

"So we simplify things. We close down the Embassy before even the extradition warrant arrives, and we leave, with all our personnel, papers and our precious fugitive, through the emergency chondromos in the basement. Back in our time, we make the necessary explanations, they make the necessary apologies to this period, and,

after a necessary interval has elapsed and memories have dimmed a bit, a new Temporal Ambassador from 2219 A.D. is appointed—one who will swear upon his arrival that he would absolutely never dream of obstructing justice. Everyone's face is saved."

He chucklingly prodded the astonished First Secretary in the ribs with the gray-bound Casebook of Extra-temporal Law. "Jump, my boy, jump! The Embassy has to be ready to move out of here in an hour. And Havemeyer has to check out the scientific problems involved in bringing Henry Groppus into the future! And you have to write out a visa for him!"

THREE weeks later—or, to be exact, one hundred years and three weeks later—Dodson called on the Ambassador, who was packing busily, having just been appointed to the Embassy on Gany-mede. Both men scratched from time to time at newly sprouted hair on their faces.

"Have you heard, sir? About Groppus? He finally did it!"

"Did what, my boy? The last I heard, he was going from triumph to triumph. Adoring crowds everywhere. A speech at the Monument to the Mendelist Martyrs. Another speech on the steps of the North American Genetic File, tearfully hailing the concrete

reality of a dream hallowed in blood—or some such moist metaphor."

The young man shook his head excitedly. "That's what I mean. After the speech on the steps of the North American Genetic File last week, he went inside with a flourish and made out an application for a fatherhood certificate—just in case, he explained, he ran into a woman he wanted to marry. Well, this morning the Genetic File completed its regulation chromosome survey on him—and he was turned down! Too many unstable patterns, said the voucher. But that's nothing, sir, nothing! What do you think he did fifteen minutes ago?"

"I don't know." The Ambassador shrugged. "Blew up the Genetic File?"

"That's *exactly* what he did! He made up the explosive himself, he said. He claimed he had to free mankind from the tyranny of eugenic red tape. He destroyed the File completely, sir!"

He sat down heavily.

The Ambassador's face had gone white. "But," he whispered, "but—the Genetic File! The only complete genetic record of every individual in North America! The basis of our civilization!"

"Isn't it—Isn't it—" Dodson gave up trying to express the calamity in words. He clenched his fists. "He's under heavy guard. But I

can tell you this, sir, and I'm not the only one who feels that way—he'll never live to face sentence. Not if I know 2319 A.D.!"

THE cry was in a deep voice, a breathless, badly frightened voice. Hoarse and urgent, it rose above the roar of the distant mob, above the rattle of traffic; it flung itself into the spacious office on the third floor of the Embassy and demanded immediate attention.

His Excellency, the Ambassador from 2319 A.D.—the sole occupant of that office—was a man of tense bearing and an extremely strained face. His eyes transmitted the unvarying message that

all things were essentially complex—and might be further complicated. It was, therefore, not at all remarkable how that cry from the grounds below made him look suddenly uncertain.

He rose and moved to the window with his usual haste. A tall, bearded man, whose clothes were torn and whose body was badly bruised, had just leaped onto the Embassy lawn from the surrounding high fence. The bearded man pointed the forefingers of both hands at the third-floor office of the Ambassador from 2319 A.D. and shrieked again:

"Sanctuary!"

— WILLIAM TENN

"How do you know you haven't been in space opera?

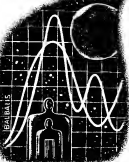
How do you know you aren't a crashed saucer-jockey?

Who were you anyhow?

**Send \$3.00 to Box 242, SA, Silver Spring, Maryland for
your copy of "History of Man" by L. Ron Hubbard."**

We're understandably proud of the fact that our subscribers get their copies of *Galaxy* at least a week before the newsstands do . . . but we can't maintain that enviable record unless, if you're moving, we get your old and new address promptly! It takes time to change our records, you know, so send in the data as soon as you have it!

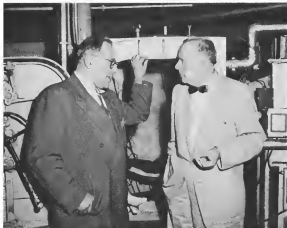
**for
your
information**



**THE SPACESHIP
IN THE BASEMENT**

By **WILLY LEY**

THE visitor, sitting in a leather-upholstered chair in the air-conditioned room—with a view on palm trees, a blue sky and a distant gold-ornamented tower—took the folder of mimeographed sheets and started reading the page to which it had been opened for him:



Willy Ley (left) and Prof. Hubertus Strughold in front of Space Cabin Simulator

SAMUSAF

**Department of Space Medicine
CURRICULUM**

**Advanced Course, Flight Surgeons
(academic requirement: M.D.)**

- 1 hour. Upper Atmosphere (physics and chemistry)
- 2 hrs. Space Medicine (space equivalent flights, satellite flight)
- 2 hrs. Human Engineering of Space Cabins
- 1 hour. Weightlessness (physiological effects)
- 1 hour. Cosmic Rays
- 1 hour. Artificial Satellite
- 2 hrs. Physiology of the Day/Night Cycle

2 hrs. Composition of Planetary atmospheres

- 1 hour. Intern. approach to medical problems of space flight
- 1 hour. Medical Problems, Air Power.

The visitor closed the folder, looked at the Chief of the Department and asked, "Only one hour for weightlessness?" and the Chief started explaining.

This visit is not an imaginary one, taking place on "a summer day in 1977." The date was the 31st of May, 1957; the place was the School of Aviation Medi-

cine, United States Air Force (Samusaf), located at Randolph Air Force Base near San Antonio, Texas, commanded by Major General Otis O. Benson, Jr. I, with General Benson's permission, was the visitor.

The curriculum is a real one, the Department of Space Medicine is one of the Departments of Samusaf, and its Chief is Professor Hubertus Strughold, M.D., Ph.D., with whom I had smörgasbord the next night, prior to taking off for the place which calls itself, unofficially and proudly, Rocket City, even though the prosaic Post Office Department keeps calling it Huntsville, Alabama.

ESTABLISHMENTS like the Department of Space Medicine do not happen by accident. They come into existence gradually. Hence they have a history, and in the case of something which is part of the U. S. Air Force, but headed by a former German, there are several lines to this history.

The beginning at the American end was the appointment, by the Adjutant General of the Army, of a board of medical officers. The board met for the first time in the fall of 1917 and began to think about its job, which was to study the "selection and maintenance" of pilots and to make the necessary recommendations. The first recommendation of the board was

the establishment of a medical research laboratory which, in time, grew into the School of Aviation Medicine of the U. S. Air Force.

As the Surgeon General of the Air Force, General Harry G. Armstrong, pointed out later, the School of Aviation Medicine happens to be older than its parent, the Air Force, because at the time the medical research laboratory was established, U. S. military flying was a part of the Army's Signal Corps.

But, of course, during the remaining days of the First World War, the inter-war period and during the Second World War, at which time General Armstrong was a colonel at Wright Field, the School of Aviation Medicine had both feet firmly on the ground and its head not much higher than the clouds. Space was still firmly reserved for the science fiction writers who were not aware that the people now in Rocket City, then at Peenemünde on Usedom at the Baltic Sea, were getting ready to shoot into space. Space Medicine did not yet exist at Randolph Air Force Base.

The beginning at the other end consisted very simply in the fact that a student who was interested in flying and whose name happened to be Hubertus Strughold got himself a Ph.D. in physiology and also an M.D. degree in preparation for an academic career.



Inside Space Cabin Simulator, photographed through open door. Behind author's head is small airlock for passing meals into cabin.

I may add here by way of explanation that a physiologist could not teach physiology to medical students in a German university if he did not have an M.D. degree. The same applied to the men who taught pharmacology or toxicology; the anatomist could be a possible exception with a Ph.D. instead of an M.D., but he then officially belonged to the Department of Zoology.

In 1927, young Professor Strughold started a rather daring innovation—he delivered a weekly lecture on aviation medicine. When

telling me this, Strughold smilingly recalled that some people in his audience, especially (German) army officers, smiled in a different way and very politely shook their heads. Lectures on aviation medicine! Who needs *that*? Those medical people really overdid their specialization! But he kept lecturing on aviation medicine.

ONLY six years after that first lecture, the Nazis came to power. The professor of physiology of the University of Würzburg, Dr. Strughold, was suspect in their

eyes. He was not a party member, and if he was invited to join, he forgot all about it. Moreover, he was known to be a Roman Catholic. In spite of all this, he was made director of the Institute for Aviation Medicine in Berlin in 1935 and held his post until 1945.

It is a virtually unknown fact in this country that Goering, as head of the *Luftwaffe*, decreed in 1942 that his airmen did not need any psychology and simply disbanded the psychological departments which existed. But the need for physiology was not doubted, even by Goering. The institute in Berlin was more or less left alone and the Allies, after the war, found nothing to criticize.

Meanwhile, the University of Heidelberg was in severe need of teachers without a political past. Doctor Strughold became professor of physiology at Heidelberg. This was in 1946. One year later, he had to request a leave to go to the School of Aviation Medicine in Texas.

There followed a year of medical teaching and of talks in all directions and in March, 1949, General Armstrong established the Department of Space Medicine (at first it was called the Department of Space Flight Medicine) because he was convinced—"for no special reason," as he said—that "some day we will travel beyond the stratosphere."

Space travel, to General Arnold, was the logical outcome of general progress and he wanted to be prepared for it in the medical field, especially since, in the past, medicine had quite often lagged behind engineering progress.

The first project of the new department was to think about a double proposition: (A) just what were the medical problems that would come up in flights beyond the atmosphere and (B) how much did we know about the climatic conditions (conducive to health and happiness or otherwise) on other planets?

For the first few years, most of the work consisted in thinking, with a little experimentation in high-altitude chambers thrown in. A number of reports and papers (mainly published in the *Journal of Aviation Medicine*) were the result. I'll mention just two items from this early work.

One was the realization that air travel had created a physiological novelty—namely that you can get "out of step" with the time in which you live.

This factor could never have been noticed before; when you cross the Atlantic Ocean by ship, or the North American continent by train, you have to advance—or else to set back, depending on the direction in which you travel—your watch one hour every day. This is hardly noticed in the general



Dr. James G. Goode explaining controls of Simulator. The gas bottle racks are attached to outside of the cabin.

holiday atmosphere of an Atlantic crossing or in the general boredom of a long train ride.

But if I take a non-stop flight from Idlewild Airport to Hollywood, I am in for an awfully long day.

WHEN I take the DC-7 at 12 noon, New York time, I land at Los Angeles International Airport at 8 PM, both according to my wristwatch and to my stomach. But the airport clock in Los Angeles says that it is 5 PM. My wristwatch can be adjusted in less

than a minute. My stomach lacks such a mechanism. By 6 PM, local time, my stomach insists that I have missed dinner. By 7 PM, my stomach is satisfied, but I have the general feeling that I ate much too late. By 8 PM, local time, I think it is time to go to bed because it feels (and physiologically it is) 11 PM. Unfortunately, the people around me think it is only 8 PM and behave accordingly.

If the DC-7 displaces me in time for about three hours for such a flight, the DC-8 or the Boeing 707 will displace me for about six

hours. The body does adjust, at the rate of about one hour in 24, which is the reason it was never noticed in ship or train travel. Whatever lack of adjustment there was left on arrival was blamed on general travel fatigue, with which, of course, it did blend.

Now the fact of this discrepancy between physiological time and actual time is most important if the traveler has to be in top form immediately after arrival. Travel times then must be planned accordingly or the traveler may lose out at the conference table, the concert hall or the sports field.

The other item I want to mention is the concept of "space equivalent altitudes." If a man, by magic, were suddenly transported to an altitude of, say, a thousand miles, he would die from "space exposure." He would have no air to breathe, his skin would blister under the unshielded ultra-violet light from the Sun, he would be hit by a few cosmic rays and possibly by a micro-meteorite, and, because of the lack of pressure, his warm body fluids would boil.

I have used the expression "by magic" advisedly to indicate that I had instantaneous transportation in mind. In reality, this would not be instantaneous, and as the test person ascended into the atmosphere, he would learn that the "space conditions" are not attained all together at the same moment,

but that they would come into play one by one.

Oxygen deficiency takes place soonest, beginning for some people at three miles, for others at four miles, but being complete for absolutely everybody at seven miles. There just is not enough oxygen to breathe; hence this particular space condition takes place fairly low in the atmosphere. (There are a number of complicating factors, but I trust Strughold will forgive me for skipping them, since GALAXY is not a medical journal.)

The next altitude where a condition like one in space takes place is around 63,000 feet. At that height, the boiling point of water has dropped to around 36° C. or 97° F. This is the temperature of the body fluids, so they begin to vaporize. The term "boiling," originally used, has now been abandoned because it produces a misleading mental image. The current and, it is hoped, permanent term, is space ebullism, coined by using the Latin word *ebullire* which means "to bubble out."

SOME authors have, often inadvertently, caused the impression that space ebullism will take place at a precise altitude. One might say they sounded as if the man were still safe at 62,998 feet and doomed at 63,002 feet. This, of course, is nonsense and would make the danger point vary with

geographical latitude. Furthermore, the vaporization and bubble formation also depends on local pressures in the body (which is different, for example, in veins and in arteries) and on local heat, for different parts of the body may have fairly distinct temperatures.

Space ebullism will begin between 63,000 and 63,500 feet and, for some parts of the body, up to 67,000 feet.

So this is another "space equivalent altitude," but with a slight difference. At 65,000 feet, the man would still be conscious for 10 to 12 seconds and might be able to do something to save himself (if pressure is restored before that time is up, he will probably survive) while in actual space the period of consciousness would be only 5 to 7 seconds.

But, though at 65,000 feet you have reached two space equivalents (anoxia or more precisely anoxic anoxia, lack of enough oxygen; and space ebullism because of lack of pressure), the other space equivalents have not yet been reached.

The atmosphere is still a fine protection against ultra-violet—that particular space equivalent altitude lies between 120,000 and 140,000 feet—and against meteoric dust. The atmosphere does not become space equivalent with regard to meteorites below 80 miles. While the atmosphere as a whole reaches

up for quite some distance, "space with some of its properties reaches down to 50,000 to 80,000 feet," as Strughold puts it.

ALL this introduction was necessary to show the things the Department of Space Medicine has to worry about. In the early years, incidentally, the staff of the department consisted of just three men, Prof. Strughold (physiology), Dr. Heinz Haber (physics and astronomy) and Dr. Buettner (meteorology). Later, Dr. Fritz Haber (engineering) was with the department for some time.

Now the three men working directly with Prof. Strughold are James G. Gaume (M.D.), Captain Emanuel M. Roth (M.D.) and Mr. Fenton Duepner (electronics engineering). But I must not forget the department's hard-working secretary, Mrs. Margaret B. Niehaus who, among other things, is supposed to know where everybody is at a given moment, and usually does.

What is at first confusing to a casual visitor is that several scientists whose work belongs into the concepts of space medicine do not belong to the department, even though they are at Randolph Air Force Base. For example, George T. Haury (Ph.D.) belongs to the Department of Experimental Psychology, while the psychologist Siegfried J. Gerathewohl (Ph.D.)

is in the Department of Ophthalmology and Hans-Georg Clamann (M.D.) is in the Physiology-Biophysics Department.

After I had made some official and some private visits and brought myself more or less up to date on personnel and areas of research, Prof. Strughold asked me, "What do you want to see first—Mars in a jar or the spaceship in the basement?" Since Mars in a jar was one floor closer, I decided on that.

THE surface conditions of Mars, as you probably know, are as follows: Air pressure like that in our atmosphere eleven miles up, but with a different composition—all nitrogen, that is, with a possible faint trace of oxygen and a relative humidity of not quite one per cent. Daytime temperature up to 70° F., nighttime temperature below minus 40° F., surface gravity 0.38 that of Earth.

Except for the lower gravity, all this can be duplicated in a restricted space. The restricted spaces in use look very much like large pickle jars. They hold soil and rock of a type we would expect to crunch underfoot on Mars. Their atmosphere is nitrogen of sufficiently low density with a trace of water vapor. During the day, the jars stand on shelves in the air-conditioned rooms and are permitted to warm up to 70 to 75° F.

In the evening, they are put into a very cold super refrigerator.

Fortunately, the difference between Earth day and Martian day is only 37 minutes and about 23 seconds, which can be disregarded.

The "inhabitants" of the Mars jars are only bacteria, so far. The interesting point is that they are inhabitants, for they can live under these conditions. It seems that whenever a new colony of bacteria is introduced to Mars, a large number of them die off, but the tougher survivors soon increase the population figure again.

Next to the Mars jars, incidentally, there was apparatus with algae busily producing oxygen.

"*Chlorella*?" I asked, because all such work I have ever read about had been with *chlorella* algae.

"No," was the answer, "this is *Nostoc*." And since I did not answer at once, the speaker (I believe he was Lt. John A. Kooistra, Jr., but wouldn't swear to it) continued: "This does not mean that we think *Nostoc* will be the last word, but it is our starting point."

My silence had had an entirely different reason, however. *Nostoc* is virtually a childhood friend of mine. After Krakatoa blew up in 1883, completely sterilizing itself, the ruins of that island were resettled by living things. The first living thing to establish itself on the bare volcanic rock was *Nostoc*, which seems to be about as

hardly an explorer and settler as Man himself.

"All we have to do now," mused somebody, "is to teach these algae a few things. They have to learn to live on human waste materials, to swallow clouds of carbon dioxide, to produce clouds of pure oxygen, to reproduce quickly and not succumb to accidental poisoning, to thrive under zero-g and become edible in several different flavors."

It was not completely a joke. It is perfectly possible for algae to do every bit of this. All you need to do is to find, or breed, the right strains.

WE climbed down to the basement, where the Department of Space Medicine has built itself a spaceship. Like the proverbial boat in the cellar, they couldn't get it out in one piece, if at all, even though it is not a whole spaceship but merely a spaceship cabin. It began as a project several years ago under the name of Sealed Cabin; now that it is a reality, it is known under the more appropriate name of Space Cabin Simulator.

It is made of steel and the inside air space is 110 cubic feet. Outside the Simulator, the basement air is an even air-conditioned 75° F. Inside the Simulator, after the steel door has been closed, it can be anything Dr. Gaume wants

it to be. My first question was what will happen if nothing is done. The result is about what one should expect. After three hours, the inside temperature is up to about 95 degrees and the relative humidity is around the same figure. If I remember correctly, it trails a bit behind, but not much.

The external shape of the Space Cabin Simulator is not at all easy to describe. The main part of it is a wide steel cylinder standing on end. In front, a boxlike shape is attached to this cylinder. You enter through this section.

The man who serves as a test subject sits facing the (closed) door. If the test lasts long—some men have been inside for over 24 hours—the chair opens out into a six-foot bed. If the test subject wants to sleep, the scientists don't mind at all, but he must be able to sleep with the lights on, for he is, after all, under observation whether awake or asleep. To the left of the test subject, there is a small airlock through which meals can be passed inside.

All the control equipment is outside, partly for reasons of simplicity, partly for easy access in case something needs to be adjusted or repaired. The simplest test would be that a man sits inside for a number of hours with a supply of reading matter. His very presence ruins the atmosphere and the machinery's job is to keep

the atmosphere in good repair.

The man does three main things to the sealed air. He heats it up, he removes oxygen from it by breathing, and he adds carbon dioxide and water vapor, also by breathing, plus more water vapor by skin evaporation. The oxygen is replaced as it is used up, the carbon dioxide is removed chemically, and the water vapor is removed by condensing it out in the air conditioner, which also removes the surplus heat. The air breathed by the man is always the same. Nothing is added but oxygen, nothing removed but heat, water vapor and carbon dioxide.

This simple test is actually more a test of the machinery than of the man. But it has to begin that way. Only if you are sure that the machinery can keep the air cool and breathable can you start introducing variations.

One elementary variation of this type is to permit the carbon dioxide to accumulate. Eventually, in a spaceship, plants are to be called upon to absorb the carbon dioxide and a good deal of the moisture and to produce the oxygen for the crew. Plants can do with the very small amount of carbon dioxide normally in the air. They do better if the carbon dioxide content is somewhat higher. How high can it be permitted to get, for the sake of the plants, without harming the men?

A **N**OTHER variation is to lower the pressure in the cabin. I don't know what the simulated spaceship in the basement at Randolph Air Force Base weighs, but a real spaceship cabin will have to be much lighter. Any engineer knows that there are spots in any structure where a leak may take place. He also knows that there may be a slow leak with 14 pounds of pressure on one side (and no pressure on the other), but that there may be no leak if the pressure is only 7 pounds per square inch.

Before you can decide on building such a lighter cabin for less inside pressure, though, you have to find out how the man inside is doing. This is one of the many many possibilities where the Simulator comes in as a research instrument.

Reduce the total pressure inside the Simulator to 7 pounds per square inch. But vary the ratio between nitrogen and oxygen in such a manner that the man still gets the same amount of oxygen with every breath he takes. How does the man react? Well, he doesn't, which is to say that he feels fine.

But there is now another problem: the cabin air is much richer in oxygen than normal air. How much of a fire hazard is this richer oxygen mixture? The answer seems to be that there is no greater hazard that a fire may start just

because there is more oxygen. But once a fire has started, the rate of combustion is much faster.

Another problem: years ago, the Navy started experiments with a helium-oxygen atmosphere in diving suits. The reason is rather well known by now. Nitrogen dissolves in the blood (and body fluids generally) under pressure; if the pressure is suddenly released, the nitrogen forms bubbles in the fluids which cause the dangerous "bends." Helium is absorbed under pressure to a far lesser extent and therefore there is far less dissolved gas to form bubbles.

However, the helium bubbles happen to be larger than the nitrogen bubbles. So the problem shapes up as follows: in a spaceship cabin, we might reduce the total atmospheric pressure for engineering reasons. For the sake of the

crew, we then change the composition so that the spaceship atmosphere is richer in oxygen. (For the sake of the plants, we might also permit the carbon dioxide fraction to grow larger.) But what do we use for the inert gas in the atmosphere? Just helium? Or a mixture of helium and nitrogen in a proportion still to be established? Or use argon instead of nitrogen in such a mixture?

These are the problems on hand. Some are already under investigation. Some are on the list and their turn will come as soon as the current work is finished. True, to some extent these problems can be investigated on paper. But there comes a time when you need observed facts.

And then you start using the Space Cabin Simulator.

—WILLY LEY



WHAT'S HE DOING IN THERE?

By FRITZ LEIBER

*He went where no Martian ever
went before—but would he come
out—or had he gone for good?*

Illustrated By BOWMAN

THE Professor was congratulating Earth's first visitor from another planet on his wisdom in getting in touch with a cultural anthropologist before contacting any other scientists (or governments, God forbid!), and in learning English from radio and TV before landing from his orbit-parked rocket, when the Martian stood up and said hesitantly, "Excuse me, please, but where is it?"

That baffled the Professor and the Martian seemed to grow anxious—at least his long mouth curved upward, and he had earlier explained that it curling downward was his smile—and he repeated, "Please, where is it?"

He was surprisingly humanoid in most respects, but his complexion was textured so like the rich dark armchair he'd just been occupying that the Professor's pin-

striped gray suit, which he had eagerly consented to wear, seemed an arbitrary interruption between him and the chair—a sort of Mother Hubbard dress on a phantom conjured from its leather.

The Professor's Wife, always a perceptive hostess, came to her husband's rescue by saying with equal rapidity, "Top of the stairs, end of the hall, last door."

The Martian's mouth curled happily downward and he said, "Thank you very much," and was off.

Comprehension burst on the Professor. He caught up with his guest at the foot of the stairs.

"Here, I'll show you the way," he said.

"No, I can find it myself, thank you," the Martian assured him.

SOMETHING rather final in the Martian's tone made the Professor desist, and after watching his visitor sway up the stairs with an almost hypnotic softly jogging movement, he rejoined his wife in the study, saying wonderingly, "Who'd have thought it, by George! Function taboos as strict as our own!"

"I'm glad some of your professional visitors maintain 'em," his wife said darkly.

"But this one's from Mars, darling, and to find out he's—well, similar in an aspect of his life is as thrilling as the discovery that

water is burned hydrogen. When I think of the day not far distant when I'll put his entries in the cross-cultural index . . ."

He was still rhapsodizing when the Professor's Little Son raced in.

"Pop, the Martian's gone to the bathroom!"

"Hush, dear. Manners."

"Now it's perfectly natural, darling, that the boy should notice and be excited. Yes, Son, the Martian's not so very different from us."

"Oh, certainly," the Professor's Wife said with a trace of bitterness. "I don't imagine his turquoise complexion will cause any comment at all when you bring him to a faculty reception. They'll just figure he's had a hard night—and that he got that baby-elephant nose sniffing around for assistant professorships."

"Really, darling! He probably thinks of our noses as disagreeably amputated and paralyzed."

"Well, anyway, Pop, he's in the bathroom. I followed him when he squiggled upstairs."

"Now, Son, you shouldn't have done that. He's on a strange planet and it might make him nervous if he thought he was being spied on. We must show him every courtesy. By George, I can't wait to discuss these things with Ackerly-Ramsbottom! When I think of how much more this encounter has to give the anthropologist than even



WHAT'S HE DOING IN THERE?

the physicist or astronomer . . ."

He was still going strong on his second rhapsody when he was interrupted by another high-speed entrance. It was the Professor's Coltish Daughter.

"Mom, Pop, the Martian's—"

"Hush, dear. We know."

The Professor's Coltish Daughter regained her adolescent poise, which was considerable. "Well, he's still in there," she said. "I just tried the door and it was locked."

"I'm glad it was!" the Professor said while his wife added, "Yes, you can't be sure what—" and caught herself. "Really, dear, that was very bad manners."

"I thought he'd come downstairs long ago," her daughter explained. "He's been in there an awfully long time. It must have been a half hour ago that I saw him gyre and gimbal upstairs in that real gone way he has, with Nosy here following him." The Professor's Coltish Daughter was currently soaking up both Jive and Alice.

WHEN the Professor checked his wristwatch, his expression grew troubled. "By George, he is taking his time! Though, of course, we don't know how much time Martians . . . I wonder."

"I listened for a while, Pop," his son volunteered. "He was running the water a lot."

"Running the water, eh? We know Mars is a water-starved

planet. I suppose that in the presence of unlimited water, he might be seized by a kind of madness and . . . But he seemed so well adjusted."

Then his wife spoke, voicing all their thoughts. Her outlook on life gave her a naturally sepulchral voice.

"*What's he doing in there?*"

Twenty minutes and at least as many fantastic suggestions later, the Professor glanced again at his watch and nerved himself for action. Motioning his family aside, he mounted the stairs and tiptoed down the hall.

He paused only once to shake his head and mutter under his breath, "By George, I wish I had Fenchurch or von Gottschalk here. They're a shade better than I am on intercultural contracts, especially taboo-breakings and affronts..."

His family followed him at a short distance.

The Professor stopped in front of the bathroom door. Everything was quiet as death.

He listened for a minute and then rapped measuredly, steadying his hand by clutching its wrist with the other. There was a faint splashing, but no other sound.

Another minute passed. The Professor rapped again. Now there was no response at all. He very gingerly tried the knob. The door was still locked.

When they had retreated to the

stairs, it was the Professor's Wife who once more voiced their thoughts. This time her voice carried overtones of supernatural horror.

"What's he doing in there?"

"He may be dead or dying," the Professor's Coltish Daughter suggested briskly. "Maybe we ought to call the Fire Department, like they did for old Mrs. Frisbee."

The Professor winced. "I'm afraid you haven't visualized the complications, dear," he said gently. "No one but ourselves knows that the Martian is on Earth, or has even the slightest inkling that interplanetary travel has been achieved. Whatever we do, it will have to be on our own. But to break in on a creature engaged in—well, we don't know what primal private activity—is against all anthropological practice. Still—"

"Dying's a primal activity," his daughter said crisply.

"So's ritual bathing before mass murder," his wife added.

"Please! Still, as I was about to say, we do have the moral duty to succor him if, as you all too reasonably suggest, he has been incapacitated by a germ or virus or, more likely, by some simple environmental factor such as Earth's greater gravity."

"Tell you what, Pop—I can look in the bathroom window and see what he's doing. All I have to do is crawl out my bedroom window

and along the gutter a little ways. It's safe as houses."

THE Professor's question beginning with, "Son, how do you know—" died unuttered and he refused to notice the words his daughter was voicing silently at her brother. He glanced at his wife's sardonically composed face, thought once more of the Fire Department and of other and larger and even more jealous—or would it be skeptical?—government agencies, and clutched at the straw offered him.

Ten minutes later, he was quite unnecessarily assisting his son back through the bedroom window.

"Gee, Pop, I couldn't see a sign of him. That's why I took so long. Hey, Pop, don't look so scared. He's in there, sure enough. It's just that the bathtub's under the window and you have to get real close up to see into it."

"The Martian's taking a bath?"

"Yep. Got it full up and just the end of his little old schnozzle sticking out. Your suit, Pop, was hanging on the door."

The one word the Professor's Wife spoke was like a death knell.

"Drowned!"

"No, Ma, I don't think so. His schnozzle was opening and closing regular like."

"Maybe he's a shape-changer," the Professor's Coltish Daughter said in a burst of evil fantasy.

"Maybe he softens in water and thins out after a while until he's like an eel and then he'll go exploring through the sewer pipes. Wouldn't it be funny if he went under the street and knocked on the stopper from underneath and crawled into the bathtub with President Rexford, or Mrs. President Rexford, or maybe right into the middle of one of Janey Rexford's Oh-I'm-so-sexy bubble baths?"

"Please!" The Professor put his hand to his eyebrows and kept it there, cuddling the elbow in his other hand.

"Well, have you thought of something?" the Professor's Wife asked him after a bit. "What are you going to do?"

The Professor dropped his hand and blinked his eyes hard and took a deep breath.

"Telegraph Fenchurch and Ack-erly-Ramsbottom and then break in," he said in a resigned voice, into which, nevertheless, a note of hope seemed also to have come. "First, however, I'm going to wait until morning."

And he sat down cross-legged in the hall a few yards from the bathroom door and folded his arms.

SO the long vigil commenced. The Professor's family shared it and he offered no objection. Other and sterner men, he told himself, might claim to be able

successfully to order their children to go to bed when there was a Martian locked in the bathroom, but he would like to see them faced with the situation.

Finally dawn began to seep from the bedrooms. When the bulb in the hall had grown quite dim, the Professor unfolded his arms.

Just then, there was a loud splashing in the bathroom. The Professor's family looked toward the door. The splashing stopped and they heard the Martian moving around. Then the door opened and the Martian appeared in the Professor's gray pin-stripe suit. His mouth curled sharply downward in a broad alien smile as he saw the Professor.

"Good morning!" the Martian said happily. "I never slept better in my life, even in my own little wet bed back on Mars."

He looked around more closely and his mouth straightened. "But where did you all sleep?" he asked. "Don't tell me you stayed dry all night! You *didn't* give up your only bed to me?"

His mouth curled upward in misery. "Oh, dear," he said, "I'm afraid I've made a mistake somehow. Yet I don't understand how. Before I studied you, I didn't know what your sleeping habits would be, but that question was answered for me—in fact, it looked so reassuringly homelike—when I saw those brief TV scenes of your

females ready for sleep in their little tubs. Of course, on Mars, only the fortunate can always be sure of sleeping wet, but here, with your abundance of water, I thought there would be wet beds for all."

He paused. "It's true I had some doubts last night, wondering if I'd used the right words and all, but then when you rapped 'Good night' to me, I splashed the sentiment back at you and went to sleep in

a wink. But I'm afraid that somewhere I've blundered and—"

"No, no, dear chap," the Professor managed to say. He had been waving his hand in a gentle circle for some time in token that he wanted to interrupt. "Everything is quite all right. It's true we stayed up all night, but please consider that as a watch—an honor guard, by George!—which we kept to indicate our esteem."

—FRITZ LEIBER

Is your collection of *Galaxy Magazine* complete?

If not, here is your chance to fill in missing copies.

Back numbers of *Galaxy Science Fiction Magazine* are available from May, 1951, on.

Inventories are running low. Don't miss your chance to complete your collection.

6 For \$1.50 or 35c each

GALAXY Publishing Corp.

421 Hudson Street • New York 14, N. Y.

Enclose check,
cash or money order.
We pay postage

Name
Address \$.....
City State

PAYLOAD

By RAYMOND E. BANKS

If there were no better spaceships than those that belonged to Quantum—and there weren't—what were their competitors beating them with?

Illustrated By WOOD



THE Chief called me in about ten that morning. With a sweep of the hand, he cut off all communication buttons with the rest of his subordinates, by which I knew that something big was stirring.

"Carl," he said, "do we or do we not ship chemicals to Mars from which the Earth Colony can make hard-to-get water and oxygen for their climate-restoration project?"

I spoke right up. "We do."



He nodded his crew-cut, iron-gray head. "Do we not also carry mail at special mail rates for the Colonies on Mars and the Asteroids?"

"It brings in good money."

The Chief fingered one of our

space tariffs, which gave rates on the thousand or so most essential Earth-manufactured items that we shipped to the Moon and Mars Colonies as well as to the new Asteroid groups. Scientific instruments needed to survive on strange

planets. Special foods and clothing. Communication stuff. Even a few luxury items to make the Earth Colonists feel at home.

"To do all this, Carl," said the Chief, leaning back and closing his eyes, "we maintain a fleet of a dozen of the finest spaceships. We pay rental on three of the space stations, and we have another half-dozen new spaceships a-building."

I nodded. "Cost Accounting is worried about that, too, Chief. We've got almost two hundred million tied up there, and no matter how many trips we make with full cargo, we can't make money. The little profit we show has to be plowed back into equipment."

"It takes fourteen men, good and true, drawing fourteen salaries to run those ships," he said. "Not roustabout salaries, but money paid to good technical men who will put up with the vicissitudes of space travel month in and month out."

"**L**OOK," I said, growing impatient, "I know all about what it takes to run Quantum Associates. I dream those figures at night. With the last three rate boosts, we've finally gotten past the experimental stages of cost accounting and know what it costs us to deliver a pound of goods on Mars. The figures may seem fantastic to our customers, but the

point to argue is that so far there is no return trade to spread the expense. When we find something valuable out there, we can fill our ships on the return sweep and lower shipping costs."

He smiled the sickly sweet smile that meant trouble. "And so we charge twenty-five hundred dollars a day running costs per ship in space."

I realized that he was quoting my new figures for the National Spaceloading contract. This was a purchasing firm, similar to the old railroad carloading companies that sold shipping space to small shippers at the higher less-than-carload rates, and shipped enough to send out full carloads at the lower rates and made their profit on the difference. We encouraged this, as it guaranteed full payloads on every trip. The National Spaceloading contract was new and it was going to do a lot for Quantum Associates.

"I can't shave those figures, Chief. National Spaceloading has no complaint. Let them ask for a government subsidy if they can't stand the new rate. We can't go on losing—"

He cut me dead. "You don't have to shave those figures. The government won't have to subsidize. We lost the National Spaceloading contract."

"What?"

I did a rapid mental calcula-

tion. There were two other companies competing with Quantum Associates, smaller than us. They had their hands full and were charging more than we were, since their original fleets hadn't been amortized as ours was.

"Who beat us?" I asked, baffled.

"Julia Associates."

"Never heard of them."

"Neither have I. But they've delivered the necessary hundred thousand tons of goods to the Moon station in order to establish their space-freight status, as required by law. They're quoting a flat hundred dollars a day in space."

"A hundred dollars a day!"

"Against our twenty-five hundred," said the Chief, smiling wryly. "You'd better zip up to the space station and see what the hell goes. With this kind of competition, we'll be grounding our entire fleet by November."

I GOT out of there fast. I made a noon reservation for the rocket blast to one of our space stations and threw a couple of things in a bag. Goods get shunted up there by the Short Freighters—that's an Earth-rocket proposition, not space travel—and we take over at the space station, as do all space shippers.

One thing was foremost in my mind. I was a young man in a young business. Like most of

Quantum Associates, I had begun with Earth-rocket freighting, which is a very old business where you have as much chance to advance as a barnacle on the outside keel of an oceangoing liner. The important positions in Earth-rocketing are darn near hereditary. They go to friends or relatives of the guys already in good spots.

Space shipping, on the other hand, is as new as tomorrow's spacecast. Carl Cummings—me—didn't intend to be jarred loose from his new career by Julia Associates or anyone else.

I paused long enough to get a quick Dunbrad on Julia Associates. Capitalization was very small, but shippers, with their insurance and bonding protection, don't care about that. I found something more interesting. Frank Stresinger and Julia Stresinger, brother and sister, were listed as controlling company officers and owners.

I never heard of Julia Stresinger, but the name of Frank Stresinger touched off a faint bell in my mind.

Just before I loaded aboard the Earth rocket for the space station, I called our Legal Department to clarify my memory.

I was right. There was a connection between Quantum and Stresinger. Two years before, Quantum Associates had had an employee of that name.

Frank Stresinger was a space

engineer who'd been lost from one of our spaceships out on the Asteroid Belt. In his lawsuit against the Company, he charged that while he was making some exterior repairs, our ship had taken off from under him, deserting him in space and causing him physical injury and mental distress, what with exposure to unknown cosmic rays and the mental harassment of the meteor danger.

He had drifted two days before the mass of the asteroid which the ship had just visited finally exerted itself on his smaller mass, and he sank lightly back to the Asteroid Colony.

A lucky escape. What's more, we'd tried to pay him off for an incident that most space engineers would have laughed at, but he went ahead and sued. In the trial, we made him look pretty silly, pointing out that he had failed to notify anybody but the cook when he went outside, a clear violation of Company rules. He lost the suit.

At the same time, the incident broke up some of the informality of crew life and we never lost a man after that, so we came out ahead all around.

But I was bothered. Had he discovered something about space travel that the rest of us hadn't? What had he found that allowed him to operate a spaceship on one hundred dollars a day?

NATIONAL Spaceloading had just taken over one of the two dozen space stations originally built by the government for military purposes, but of less importance now that the Moon and Mars Colonies were well established.

I went immediately to the National Spaceloading station instead of to the Quantum stations. I knew Halsey, the National Spaceloading traffic manager, from my old Earth-rocket days and went directly to his office-living quarters. I found him knee-deep in manifests.

"Gravitate elsewhere, Carl," he told me. "I'm making shipments for Mars and the Asteroids. I've got to clear a thousand tons tonight. Tomorrow I'll buy you a beer."

"Just asking a favor. How's about sneaking me into one of the ships of Julia Associates for a look around?"

He shot me a funny look. "Why don't you ask Julia Associates? They're down in the bar, waiting to take over our thousand-ton shipment for Mars."

"Well, at least you can tell me something about the ships—"

Halsey scowled. "Listen, Carl. We're not spacemen. We only assemble shipments. We shove 'em off the station to the taxis. The taxis tow them to the spaceships just like at your own docks. Once the stuff is checked out of the

space station, I don't worry about it any more."

"You've never been on one of their ships," I said accusingly.

"They take the goods from us and they deliver the goods to destination. For a reasonable price—one that Quantum can't meet, Carl. If they're mysterious about their ships, that's no problem of mine. For their rates, I ask no questions."

I took a stab in the dark. "They don't have any ships," I said.

He gave me a neutral answer: "Get the hell out of here."

I WENT down to the bar. I found a scowling young man and a loose-legged young woman having some drinks.

"Hi, friends," I said.

I got two cold nods.

"I used to work for Quantum," I said. I shoved back my sleeve to show the scar I got when I was a kid, working summers in Earth rockets. "I got hurt on a run last year and the Company wouldn't do anything about it, the lousy rats."

No change in expression.

"I heard you were shipping," I said. "I need a job."

"Our crews are full," said the guy.

"How did you know we were shipping?" asked the girl. I immediately pegged her as the less hostile.

"I've been scratching out an

existence down yonder and keeping my ears working. And word gets around—"

"Word couldn't," said the girl.

"Nobody knows about us except National Spaceloading and possibly our rivals, Quantum Associates, who just lost a contract." Frank Stresinger gave a nasty laugh.

"All right," I grinned. "I got a girl friend in the office of Harvey J. Mortimer at Quantum. She let it slip."

I was thinking of the prune-faced Miss Whelan and the Chief. The idea of the Chief having a pretty, young office decoration or of Miss Whelan with her thirty solid years of executive secretaryship blabbing anything was a riot. But these people didn't know that, and they didn't know me.

I thought the girl's eyes softened a little.

"Frank," she said, "we could use a hired man."

Frank shook his head. "When I want a hired man, I'll go find him myself. Nobody else need apply."

I mixed a drink for myself. You don't have room in space stations for luxuries like bartenders.

It was time to lay off. Sometimes you can make a sale by just hanging around and not saying too much. I sat there staring out the window at Earth, trying to look worried and unemployed. My success was partial. Presently Julia

Associates got up to leave, and a twenty-dollar bill floated down in my lap.

"We had it tough ourselves once," said the girl. "Maybe this'll help. Why don't you try photons, Inc., or Spacesavers? They hire sometimes."

The man jerked the girl's arm. "Come on, Sis. He's a spy. If he shows up near our shipment, I'll blow his head off."

"I just hate to see anybody starve," she said.

Frank grunted and they left.

WHEN Halsey didn't even invite me to supper, I taxied to Johanson's grimy little place, which can hardly be dignified with the name of a space station. It was formerly used to house a big telescope in the early days, separate from the stations. Now they've got the fine observatories on the Moon.

Johanson had converted the old structure as a base for his space taxi business, but there was hardly room for the taximen to rest their weary heads, exhausted after a day of bouncing passengers and cargo from one space station to another, or from the space stations to the spaceships proper.

Like the rockets that brought people and things up to the stations from Earth, the taxis were a separate operation from ours, but Johanson knew me well. He and I once pulled freight together

in Earth rockets. I had a plan and hoped I wouldn't run into him.

I went in with my dummied-up bag of old newspapers in a mail container I stole from Halsey.

"Mail for the Julia Associates for Mars," I told the duty man.

The bright-eyed kid on the Operations Desk didn't know me. He gestured over his shoulder.

"Dump her over there," he said, indicating some other mail bags. "Taxi 202 will make the run out in a half-hour. That's the last taxi out for them before takeoff."

I shook my head. "Got to have this bag signed for personally by Julia Associates. Special U. S. Mail."

"Our taximan'll get the signature."

"I've got to go to their ship," I said.

He looked at me funnywise. "Frank Stresinger doesn't like strangers around his mooring. The Post Office will never know that you didn't actually go and get the signature. Stay away from them, friend."

I shrugged. I might've argued further, but just then Old Johanson came in with his hang-dog look from trying to satisfy too many people for too many years and dropped in a chair. "Hi, Carl," he said. "How's everything with Quantum Associates?"

"Fine," I said glumly.

The young fellow snickered. "He

wanted to go out to the Julia Associates shipment. Wouldn't Frank love that if he could catch a Quantum man out there? He'd shoot this guy's pants off."

Johanson didn't laugh. He got right up out of his chair. "You'd better leave them alone, Carl. That young punk is a little crazy. He'll shoot you dead if you go out there."

That ended Plan One. I needed another. "Just curious," I sighed, sitting on the desk. I pulled out a bottle of stuff I'd swiped from Halsey's bar. "I suppose you taximen are still losing money so that all you can afford to drink is space-glue."

Johanson and the young guy both gave their eyeballs a treat at the sight of my bottle.

"Black and Tan," breathed the young man.

"Real Black and Real Tan," said Old Johanson, eyes aglitter, "is Real Good Scotch."

"Never mind the commercial," I said, breaking the seal.

As I poured the fire into the tin cup, Johanson said: "Remember, Carl, I ain't taking you out to no Julia Associates shipment, nor none of my men."

AS it turned out, we got into a hot argument about the mailbags. I claimed that it was perfectly legal for a man to buy postage and ship himself through space in

a mailbag. Johanson doubted it. He's a kind of space lawyer anyway, and he had all the rules at the tip of his tongue. But I proved it was physically possible by showing him that a man could comfortably fit into an empty mailbag.

I put on my space helmet, which took care of the air problem. I snuggled down in comfort. From inside the bag, I could faintly hear Johanson and his young employee arguing the merits of the case.

Presently Johanson said: "Say, what happened to Carl? He was here a minute ago."

"Don't know. But he left his bottle. He'll be back."

"He better come soon," giggled the youth. "All of his Black is gone, and the Tan is gettin' low!"

Half an hour later, the taximan came in, sniffed the air, grumbled and loaded his mailbags into Taxi 202, the last taxi to go to the Julia Associates shipment before take-off. He had no trouble loading me with the rest—inside Johanson's cubbyhole, I had a weight of about two pounds due to centrifugal force of the structure's rotation; outside of it, I was as weightless as the rest of the mail.

We took off.

The conversation at the round-up point was simple and brief. I could hear it because the headset in my space helmet was zeroed on "vicinity," which is the way most radio space talkbacks work, in-

stead of by single frequencies.

"This is all," said the man. With the top down, he was chucking the mailbags over the side of the taxi.

"It's enough," grumbled Frank Stresinger. "Now beat it."

"Thought I might wait around until you loaded onto your spaceship," said the driver. "With all this stuff, you could use some help." Then he gave a big guffaw.

"Beat it."

"You got an awful big ship," said the taximan. Then, frightened: "Okay, okay, take it easy. I'm just kidding."

And the taxi zoomed off, leaving the mailbags, including me, drifting there.

I made then what was my first mistake and almost my last. I unfastened the mailbag, stuck my helmeted head out of it and said over the radio: "Hi, Frank! Need some help?"

I was only about twenty feet from him and he was bending over, standing on a large cargo box, doing something with a rope. He gave a cry of rage—"Spy!"—and dropped his rope and began to dig for his gun. Since I didn't have any, I decided to remove myself as a target as quickly as possible.

FORTUNATELY, there was about an acre of boxes and bundles, all bumping together there in space, centering around its own mass, drifting gently Earthward.

The reflected Earthlight was just dim enough for me to hope for security. I opened the jets on my shoulder harness and headed straight for the biggest bulk of crates—what looked like some of the oxygen-water manufacturing machines that Quantum Associates had hoped to be shipping to Mars.

I cut my jets and scrambled into the blackness of the cargo, sliding in and around boxes like an ant diving into his hole. With a thousand tons of the stuff conglomerated in a mass, it wasn't hard to hide. I couldn't hear Frank's shots because there was no medium to transmit the sound waves, but I could feel the boxes vibrate where his probing shots hit them instead of me. Friendly cuss!

He was digging madly in the boxes and I was burrowing deeper into the mass when Julia came alongside of him and I could hear the talk over my receiver.

"Frank, we've got to get started."

"First I'm going to kill me a spy!"

"You've got two months to hunt him out while we're traveling. But we can't waste even two hours going through all of this cargo just now."

"Get Old William and Mary! I ain't starting till he's been taken care of!"

"You and your hate-everybody routine," she said. "I won't get

them. They're busy finishing the lashing job. Come on now."

"Give me just fifteen minutes—ten."

"I've already set the breeder-reactor. We start in five minutes, whether or not you've finished your part of the lashing."

Frank groaned and they moved off, arguing.

I stayed hidden, deep in the darkness. In about five minutes, I felt an enormous tug. Then nothing.

Space sensations are tricky. I had only my space station experience to give me orientation—that three weeks I'd spent at the stations, setting up a cost accounting system. But it felt funny.

I clambered out of my hiding place and peered around to check up. Over the jumbled surface of the mass of shipping boxes, I could see the Earth behind us, dwindling as we accelerated, its yellow-green disk turning into nothing greater than an oversized moon. I caught my breath when I realized what speed we had reached.

I looked up ahead and saw the Moon. It looked perfectly normal for a second—and then it jittered. We were really burning up space miles!

I looked closer at hand, directly over the carpet of boxes and bags ahead of me, and finally saw the spaceship that Julia Associates used.

A house-trailer!

YOU can imagine why I cursed that Black and Tan for several minutes before I believed what I saw.

This was the scene:

First, an ordinary old-fashioned highway house-trailer of the aluminum kind, only it was obviously plated with space steel, an isotope alloy of great toughness. A large rope, the size of hawser for a major oceangoing ship, was hooked to one side of the trailer. The rope wandered off one side of the trailer and threaded its way in a rough semi-circle behind.

Laced to the rope at regular intervals was the cargo of Julia Associates, the whole mass of it strung like beads on a necklace. The circle looped around gracefully and came back to the other side of the house-trailer, from which, so help me, there shone ordinary lights, giving the effect of a homy, comfortable trailer seen parked alongside some country road at night!

It wasn't hard to tell what powered Frank's spaceship. It was a breeder-reactor, but a very small one. For those who don't know what a B-R is, it's an atomic power plant that produces two phenomena.

It produces power by the familiar chain reaction of cracking U-235, enough power to reach the stars.

But second, and even more im-

portant, some of the neutrons are split off to bombard a fuel pack of U-238. This U-238 is broken down into fissionable U-235, so that the device continues to make its own future fuel of U-235 while consuming its present U-235. In other words, with a few ounces of U-235 already hot and spitting out fission and a few pounds of U-238 always being converted, you can go on forever, tubes blasting. Quantum, Photon, all the spaceships use breeder-reactors, but nobody ever built one as small as Frank's. Whatever could you use such a small B-R for?

Thus the tradition-bound brains of so-called smart space engineers.

"I'm coming for you, Spy!" The words bounced in my skull and I jumped. "I see you! I'm going to shoot!"

I didn't fall for Frank's trick. I could see him as he slipped out of the door of the trailer, a gun frozen in his spacesuit mitt, and he had hoped that I would start scurrying when he turned up his radio power and shouted.

I was beginning to feel some discomfort, and I knew this cat-and-mouse routine couldn't go on forever. Then I had a bright idea. I snipped four of the mailbags off the tow rope and kicked them loose in space. My kick had the same effect as throwing them overboard, for the faster-moving mass began to leave them behind.

I TURNED on my radio sender. "You've just lost four mailbags. Uncle Sam won't like that, Frank, when you show up in Mars without the mail."

Frank said some nasty things and jetted over the acre of boxes to see what was going on. The light was getting much murkier as we moved away from Earth, and I figured that it would take him a while to find those tiny bags—although I suspected that my futile kicks hadn't broken them from the mass attraction of our flotilla and that they would follow along at a respectful distance anyway. But he couldn't know how hard I'd shoved or jetted them, and he was going crazy, working the rim of the necklace and lecturing at me. I cut off my receiver and clambered my way in haste and sweat to the trailer.

I knew there were, besides Frank and his sister Julia, a man named William and a woman named Mary—Frank had mentioned them in the argument. I could only hope they weren't as bloodthirsty as Frank.

Frank was far back in the mass now, and I jetted to the trailer door, grabbed the handle and, because it wasn't locked, stumbled in.

There was a tiny decompression chamber, big enough for a single body. The outer door slammed and the air hissed in automatic control. I could see Julia grinning



at me through the glass and I made frantic motions for entrance. The automatic machinery finished its cycle and the inner door opened.

"Welcome, Mr. Spy, to the main office of Julia Associates," said Julia with mock courtesy.

I took in the room at a glance. It was homy, all right. A stove, a table and tiny chairs, a space radio, a sofa, and by God, bookcases lined with books. There was also a very large atomic pellet gun mounted in the roof on a universal swivel.

I got off my helmet. "For gosh sakes, where is it?"

Julia held a gun which she kept pointed at me.

"Where's what?"

On the sofa sat Mary, a plump, gray-haired old lady who could have been anybody's grandmother. She was knitting. But, on closer look, I saw she had a strong jaw and was not as old as her bleached hair first made her out to be.

"In there," Mary said to me, nodding.

Julia looked puzzled while I made a dash for the tiny, closet-sized room. Then she laughed as I dived into it in agony.

The bathroom, of course.

"FRANK," said Julia, "was always a brilliant boy, but nobody would believe it. In school and later, people always thought he was lazy because he figured out

short, simple ways to do things. They laughed at him, but they usually stole his ideas."

I was bolting down a sandwich the two women had prepared for me, and drinking a celestial glass of water from the trailer's conversion system.

"Psychology aside," I said, "we can't keep up this game of space tag forever. I'm likely to get mad and twist him into the square root of nothing."

Julia laughed and stretched her long legs and yawned. She had a certain sleepy good humor about her, like a self-satisfied cat.

"This I doubt, Mr. — Er," she said.

"Carl Cummings."

"Mr. Cummings. Frank has tried hard to get ahead as a space engineer. But he kept doing things the simple way and his superiors sneered at him. Now he has his own business. But it depends on his knowledge of space and his design of the miniature breeder-reactor. You're a threat—you could steal both."

"His breeder-reactor is bolted on and space belongs to everybody," I said reasonably. "How could I steal anything?"

"Watch him, Julia," warned the older woman. "He's prying, like Frank said."

I was watching Julia's face. I had detected before, back in the bar on the space station, that there

was bad blood between Frank and his sister. Now I saw a faint blush spread over the cheeks. The easy, humorous eyes widened in anger and the lips tightened.

"For instance, his concept of mass versus weight," she said with a defiant glance at Mary. "Mass is mass everywhere in the Universe, but it equates with weight only under gravity. There is none in space. Therefore, whether a shipment runs a pound or a thousand tons, weight is no problem. A child could shove the Empire State Building around very easily out here."

"Now, Julia—"

"Everybody knows that," I said quickly.

"But nobody ever builds a concept of space travel around it! How silly to carry boxes in another box called a spaceship when there's no gravity to overcome!"

"I'm going to get Frank," said Mary, sitting up.

"You'll do no such thing," Julia told her. "I'm sick of him always being suspicious. I can't talk to anybody, anybody at all! I can't have dates, I can't call on my friends, I can't walk up the street without Frank interfering. Everybody's our enemy! Everybody's a spy! We can't even get decent help—"

"All right, all right," said Mary, looking resigned. "But Frank is going to be awful sore."

JULIA had her victory and intended to make the most of it. I could see that, unlike Frank, she was a normal, friendly type and proud of their achievements, but had never had a chance to brag about them. And what's the reason in life to do a clever thing unless you can take credit for it?

"You need a good spaceship if only to protect the crew," I said, still using probing needles. "That's where Frank's concept breaks down."

She fixed me with a triumphant eye. "Typical Earth thinking! On Earth, there's weight to overcome, weather to protect against, the effects of rain, wind and sunshine, the drag of friction, the very dangers of the clouds that hide high mountains. Out here—nothing! You need a good spacesuit to damp out the cosmic rays, control temperatures for the body. *That's* your spaceship! Power? In a vacuum like space, you accelerate something and it just keeps on going forever at that speed. I won't insult your intelligence by pointing out how we can decelerate the mass of this shipment by reforming the rope and blasting against our present direction until we overcome thrust."

"There're meteors," I said.

She tapped me on the chest with her finger. She was making a sale now, really warmed up.

"A spaceship the size of an of-

fice building offers a great deal more target than a man six feet tall and a foot and a half wide. And space is empty, Mr. Cummings. That's what people don't understand. Your chances of being hit by a meteor are less than the chances of being hit by a monkey wrench dropped out of an airplane flying over the Earth. At least that's what Frank says. Space is truly empty, a concept that Earthmen who live in a world cluttered and crammed and joggled up full of objects can't understand."

"Thanks for telling me the things I already knew," I said drily. I was a little annoyed, because I was thinking of the cost of the Quantum fleet and the ships a-building.

"You know it logically, but you don't know it to *feel* it," she said. "Frank only grasped it by accident one time when he was lost from a spaceship and floated around in free space for two days."

Mary got up. "I'm going to bed, Julia. While you're at it, why don't you also give him the blueprints for Frank's breeder-reactor?"

Julia smiled sweetly. "Good night, Mary. Rest well—we start inventory tomorrow."

MARY snorted, put on her space helmet, clomped to the door and went out.

Julia laughed at my amazed expression. "Of course she sleeps out-

side! We all do. The moving mass carries you along and you simply relax and drift. Quiet, safe, alone with the stars, drifting free and not cooped up in some sardine-bunk. It's a sleep of peace no Earthman knows."

"Well, thanks for the lecture," I said, "but Frank's coming alongside, I see. Maybe we'd better skip the blueprints."

Her eyes flashed. "I'm not giving out any secrets and Mary knows it. But I'm getting sick of this constant distrust. After all, I have some say in things. *I* had to get the money to convert this trailer. *I* had to get the backing to design and build these spacesuits, to work out the details of our qualifying shipments, to sell the services of Julia Associates to individual shippers. And *I* have to go along as crew to help with the inventory and cook the meals and—"

She threw up her hands. "Frank has been promising to hire help for a long time. He never will. He trusts nobody. When we organized this first Mars trip, I made myself the promise to grab the first man that came along—you're him—and that's why I wanted to explain things."

I looked out of the trailer window. It was very dark now, but I could see that the spacesuited figure was very close, picking his way recklessly over our meadow of goods.

"Maybe I am," I said, "but we'd better not tell Frank just yet. Put me to work first."

"Okay. Take inventory."

I've been taking inventories since I first began to shave. On Earth rockets. With Quantum. It was obvious that Julia was a good saleswoman but a poor detaller. The same went for Old William, a converted rocketman who spent most of his time curled up with a book on a comfortable shipping box, reading by a flashlight inside his space helmet. Mary was willing, but she was a little fat and a little old.

It was necessary for them to check out all their items with the manifests to be sure that no small item was lost, strayed or stolen. Quite a job in that jumbled field of boxes, containers and packages. Julia slipped me some manifests and I did more in a half-hour than the other three could do in a day.

Her eyes shone when I turned in the sheets, checked out and asked for more.

"I really got carried away," I laughed over the radio. "It's simple for a guy who thinks best staring out of his office window, automatically counting and classifying the first hundred helicopters that go by. I was born with a counting machine in my head."

"And it takes only one bullet to unwind it all," said Frank's voice, jumping out at me.

WE'D gotten careless. He came at me less than a dozen feet away, his gun out. "That's all for you, spy!"

I did a shuffle with my feet, but nothing happened except the transfer of my heart from my chest to just behind my eyes.

Julia's gun was out, too—and she pointed it straight at him, not me.

"Wait, Frank!" she said.

There are certain tones of voice that all people have learned to respect. It's the voice of someone who has been pushed just a bit too far.

"Listen—" he began.

"You listen! How many manifests did you turn over this morning as your part of the job?"

"A couple, I guess. But believe me, I had plenty on my mind! Now stand aside."

"There'll be no shooting," she said. "You gave me the concept for Julia Associates. You built the tiny B-R. You trained us for space. *But I did all the rest.* I did, excuse the expression, one hell of a lot. Now you expect to loaf around on this trip while I take the inventory, cook meals and keep the log. Only it isn't going to be that way. I've just hired a man to help me—whether you like it or not—and that's the way it's going to be!"

Frank had heavy-lidded eyes and a sleepy face, but there was

nothing wrong with the machinery behind it.

"I didn't tell you this. Last night I got on the UHF radio and called National Spaceways. Halsey says our bird here is Carl Cummings, all right, and he's the chief cost accountant for Quantum."

Julia gave me a startled look. Obviously Halsey had found out about the mailbag and the liquor I'd taken. My veins were straining against the spacesuit in fright.

"Now wait!" I said. "I can explain everything—"

Julia looked coldly at me. It was embarrassing for her to have told so much to the wrong man, but she was practical.

"He's still going to take inventory," she said to Frank. "You can guard him, if you want. By the time we get to the Moon and the inventory's taken — you can do whatever you want."

"I'll know what to do," said Frank.

THEY put me to work on the inventory. They fed me, gave me water and visiting privileges in the trailer, and the rest of the time I worked. I have never been so careful with an inventory. My own staff would've sat up in astonishment. I wanted that job to last!

"You can just knock off that recount routine," said Frank as he sat a short distance away from me,

the ever-present gun on his lap. "If you try to gum us up by faking the inventory, Sis will consider you expendable. And I'm the kid that knows how to expend."

He meant it. Each day, so much had to be done, and be done perfectly. Julia would check it all while he waited eagerly to find out if I'd lost my usefulness to her. I made sure I didn't.

In a dim way, I could even see his point of view. Years of hostility built up as he drifted from one failure to another. The big hostility against Quantum Associates. And then, at last, a victory for a man who'd always failed. The contract stolen from under the nose of Quantum. And in the midst of that victory, along comes a man who could wreck the works—a man from his old enemy, Quantum.

"Of course you can't hope to keep your little secret forever," I told them.

Julia snorted. "It'll take a long time for your bright engineers to make a B-R as small as Frank's. It took him a long time and he's as good as the best."

"Listen," I said. "I could sign you up with Quantum. You could be vice-president. Frank could be a space captain."

Frank laughed.

"Listen," I said desperately. "I could make Frank senior space captain of all the Quantum fleet.

That's plenty of publicity, plenty of income, not to mention your name being a household word. Listen—"

"Why don't you shut up and get some rest? You've got a big day tomorrow," said Frank.

I tried something else ten minutes later.

"Honey," I said to Mary, "I'll give you a thousand dollars to steal Frank's gun for me. I've got that much. I'm a Company exec with Quantum."

Big Mary gave me a scornful look.

"Frank's mother was my cousin," she said. "She was sick-like. I helped raise Frank during the times I wasn't working in one electronics factory or another. Now Frank is looking after me. What he wants goes."

Frank came hurrying over the top of our space mass. "Hey, you! Back to work!"

"A LIFETIME job," I told Old William. "You name the pension figure. I own stock in the company. I just want to get out with my skin. I won't hurt Frank or his sister."

Old William looked up from the book he was reading and tried to scratch his ear. It looked funny because of his space helmet. "I like this job even better'n night watchman." His mild brown eyes speculated on the stars. "I don't sup-

pose you'd remember overlong once you were out of trouble. And there aren't many people on Earth want to hire a lazy bookworm like me."

I didn't feel the bullet until it struck. Frank had fired it as a warning shot, but it went right through the calf of my leg. Only the self-sealing spacesuit saved me, and I knew then he really meant to kill me.

The first chance I had, I went to the trailer and got Julia to bandage me up.

"That brother of yours is out for murder," I said. "You'd better cool him down or he'll spend the rest of his life running from the law."

She straightened up from her bandaging job, flushing. "I'll speak to him," she said.

She did. It didn't do any good, except to increase the rift between them. When I saw that even Julia couldn't save me, I knew it was time to put the gray cells to work for a final try.

I had one piece of information they didn't have. I knew that a Quantum ship, the *Jolly Roger*, was heading out for the Moon on its weekly run. We would be bound to cross its path at one time or another.

Frank, with his direct kind of mind, paid no attention to space navigation. You left Earth; there was the Moon visible to the naked



eye. How could you miss it? You left the Moon and there was Mars, more prominent than it was ever seen from Earth, so you headed for it—why bother with planetary motions and points of intersection and all the rest?

True, you might have to correct your line of flight several times

as you got closer, but you could haul food in bulk behind you for at least a year and the B-R would last much longer. And no shipper would hold you for being a couple of months overdue—least of all at any such price as a hundred dollars a day.

They kept a casual watch on



the radarscope in the trailer because they didn't want to come too close to regular ships, but I fixed that. I jimmied the controls so it swept a portion of space where no spaceship would ever be, and the dial settings remained the same.

Another time, when I had a few

seconds alone near the control panel of the B-R, I set the controls at an angle which would sweep us past the *Jolly Roger's* track.

As I finished the inventory for one day, I knew that on the next we'd cross paths. And none too soon, for I had only a few more items to tally before my useful-

ness to the Stresingers would be done.

THEY always drew straws to see which one had to stay cooped up on watch in the trailer, rather than enjoying the restfulness of space. Frank lost that night.

In the middle of the night, I knocked for admittance to the trailer for a rest-call and Frank, digging sleep out of his eyes, grudgingly admitted me.

When I came out of the tiny room, I announced, "The bathroom is flooding."

Frank leveled a gun. "Well, get a mop," he grinned at me.

Frank, the engineer, was a tinkerer, good with his hands, and there's one thing that this sort of person can't stand—to watch somebody flubbing the dub when a few quick turns with the monkey wrench can fix whatever is wrong.

Frank watched me fool and fumble with his plumbing for about five minutes before he got disgusted and shoved his gun in his belt.

"Stand back," he said, "and don't think you can jump me. I've already radioed Julia that you're in here, and she'll blast you the minute you set foot outside."

"You forget I could jump you and then barricade myself in here and take the trailer and shipment."

Frank had the superior smile of

the knowing. "Wrong, spy! The master controls for the B-R happen to be on the outside. I designed it that way so I wouldn't have to go through decompression just to come into the trailer and change the line of flight. These inside controls can be taken over by the master panel outside."

And he was already digging in to his plumbing setup.

I didn't plan to escape. I didn't plan to jump him. I needed only five seconds at the other end of the trailer with his space radio. I called the *Jolly Roger*, told Captain Lake that we were in distress and asked him to accelerate on up. My message probably sounded a bit strange, but Lake, or any of our captains, were always on the lookout for distress signals. That's the code of the road in space.

JULIA Associates were somewhat astonished when the big freighter jumped out of nowhere and put out tiny space taxis and they found themselves face to face with Captain Lake and four armed men asking what the trouble was. Frank never even had a chance to use his atomic pellet gun.

I waved my hand at the acre of goods. "We lost our ship, Captain. We've been traveling with the aid of the life-raft to tow the stuff, but I don't think we can make the Moon. Can't you take us over as salvage?"

"Salvage!" roared Frank. "Listen, you spy—"

"Salvage!" cried Julia. "How dare you—"

Captain Lake's eyes glittered. "I don't see any spaceship. I've had a distress call and one of your crew members begs assistance. It looks to me like you're derelict — and salvage."

Frank was almost purple. "This man is not one of our crew! He belongs to Quantum Associates and this is a foul trick—"

Lake shrugged. "I don't know all the people who work for Quantum. Maybe he does, maybe not. But if he can prove that he's a member of your crew, I'll have to pick you up."

"You might take a look at the inventory sheets," I said. "Making 'em up is a crew job and every last one of them is in my handwriting."

THE courts had fun with that one. Of course we never had a chance to get away with the salvage claim, but the idea of shipping in space without a spaceship rather shocked the Earthmen who sat on the jury. After all, they'd been reading about spaceships for generations and to travel in space, why, by God, you need a spaceship.

That set them against Julia Associates.

They disallowed the salvage

claim, but I brought another suit for damages, including that shot Frank put in my leg. The forced-labor and mental-strain claims didn't register, but the shot in the leg did. And Frank didn't help his case by yelling on the stand that he would've aimed higher if he'd known.

At this point, the National Spaceloading shipment was still impounded on the Moon. When I presented my claim for damages, it was just too bad for Julia Associates. They couldn't pay off. And I had a lien on the company assets.

It was fun.

So was the final day in New York when the Chief rubbed his hands together and offered me a cigar.

"Well, Carl, you really managed this thing well! With Julia Associates as a subsidiary, and with their tiny B-R and those special spacesuits—nobody will be able to touch our space rates! I'm going to double your salary."

"That's green-white of you, Chief. What about Julia and her brother and company?"

"Oh, we'll find harmless spots for them. When are you going to bring that trailer over to the yards so we can duplicate the B-R for our operation?"

"Never," I said amiably.

The Chief looked at me.

"The claim that the jury

awarded me and which amounts to financial control of the Julia Associates is not to Quantum, but to me personally," I said. "I've decided to quit Quantum and run my own company."

"Now wait a minute, Cummings! Quantum saved your apples! Captain Lake—"

"Oh, I've taken care of that. I'm hiring Captain Lake. You should have his resignation today or tomorrow."

Then I showed him the new sign to hang in front of our offices: "Stresinger and Cummings, Space Shippers."

"I'll take you to court!" he shouted.

"Do that. I'll only have to pay back the money I drew from Quantum while on my trip to the Moon. The decision to go on that trip was mine, not an order from you."

"I'll build my own B-R and spacesuits and run you out of business!"

"Please do, Chief," I said. "All you need is a good, small breeder-reactor. That should only take you about five years to design. Meanwhile, with ours already in operation, we'll have five years of low-cost shipping to build us up to your size."

"I'll—I'll—"

"You'll be working for me, that's what you'll someday be doing," I said.

THAT afternoon, I had a session with Julia in the new offices I had rented.

"I'm a business woman," she said. "I know when I'm licked. I think I could bring myself to work for the new company—but there's Frank to think about. He won't come in, and it would break his heart if I did."

I took her by the arm and led her to the door. I opened it a crack. In the outer office were half a dozen people. You only needed a glance at the sound-film equipment they carried to identify them as newspapermen.

"What—"

"Just watch."

The door opened. Frank Stresinger came in. Julia, from our hiding place, gasped. Frank looked like a movie usher. He wore a uniform that had braid, braid and braid, silver on black. He looked real good in it. But his face was scowling.

"How the devil did he get that—"

"Oh, you sent it to him," I said. "You told him you had a plan to stop me from controlling the company and for him to wear the uniform and come on up here. I had the office boy deliver it after you left him at your apartment, of course."

"But—"

"Listen to them!"

Newspapermen are busy people.

They were already at work, firing the questions at Frank. As the captain of our fleet, what were his predictions for the new company? Would this smash the old-line companies? Was he hiring space people from the other companies? What—

And so on.

The man who had never had status stood there in the shining, glittering uniform and sputtered. Two or three of the newsmen were famous people. The names on the equipment were great names in network communications. They were coming to *him*, asking *him* questions—

"He'll knock them down," breathed Julia.

"He'll do nothing of the kind," I said.

HE did nothing of the kind. Within five minutes, he was strutting before the cameras, telling off the world. He was making good copy and they were lapping it up, and I closed the door.

"Now will you sign?" I asked.

"How much of the company do Frank and I get?"

"A quarter apiece. I get the other half."

"Both Photons and Space Savers will make that good a deal and lend me money to pay off your lien."

It was time to pull the final gambit. I laid the contract on the

desk. "In this state," I said, "a wife owns half of everything a husband does. Both the heads of Photons and Space Savers are married. I'm not."

Julia looked shocked. Then she looked outraged. Both ways, she looked cute.

"God, what nerve!"

"Why don't you struggle with the thought a few days?" I said.

Outside, we could hear Frank's voice, finishing the interview. All her life she'd been taking care of Frank, keeping a place for him, trying to sell his inventions, trying to give him stability. She was in her thirties, unmarried and probably sick of her narrow life. All my life I'd been struggling to get some place. Alone. I was sick of that, too.

"No, thanks," she said, deciding not to make an issue of it, but giving me an affectionate pat on the cheek.

Frank burst into the office. He stopped when he saw us.

"Well, I see you hooked him!" he crowed, seeing her cheek-pat. "Community property keeps it all in the family like you said, Julia—even if I hate the guy. Did he put up much fight?"

Julia blushed the deepest red I ever saw anyone blush.

"Not m-much," she said.

I guess she had a plan, after all.

—RAYMOND E. BANKS



GALAXY'S 5 Star Shelf

THE ASCENT OF RUM DOODLE by W. E. Bowman. The Vanguard Press, N. Y. \$2.95

EVEN if you have nothing more than the adventuresome spirit of a social climber, you'll find in *Rum Doodle* oodles of vicarious information concerning the how-to of conquering that titanic peak. To be truthful, I had never heard of *Rum Doodle* and its companion peak, North Doodle, which lies to the west.

Estimates of its height vary between 30,000 and 50,000 feet. But, taking the average, the height

works out to 40,000 $\frac{1}{2}$. Obviously, all previous accounts of successful and unsuccessful ascents of other peaks pale into insignificance alongside this epic.

The expedition consisted of seven picked men and its object was to place two men on the summit, requiring the establishment of a camp at 39,000 feet. Equipment for this camp called for five porters. Two porters were needed to carry food for these five, and another carried food for these two. His food was carried by a boy. Altogether, for the various bases and camps established up the

mountain, 3,000 porters and 375 boys were needed. As you can see, it was a remarkably well-organized assault.

The descriptive passages are as breathtakingly awesome as in any book on mountaineering you may have devoured.

Just take this example: "The North Wall is a sheer glass-like face of ice broken only by rock, snowfields, ice-pinnacles, crevasses, *bergschrunds*, ridges, gulleys, scree, *gendarmes*, *Dames Anglaises*, needles, strata, gneiss and gab-bro."

In actuality, the major credit for the incredible climb can be given the native cook, Pong. If not for him, the summit would never have been attained. But all in vain—from his cooking there was no escape.

If this misAdventure book doesn't make you forget your cares, see your doctor at once! It's laughter than you think!

TOWARDS THE HEREAFTER by Reginald M. Lester. *The Citadel Press, N. Y., \$3.75*

IN this sequel to *In Search of the Hereafter*, Lester pursues two avenues of research, communication with the departed and spiritual healing. His documentation is average for this type of work and sets up a choice of believe-it-or-not.

THE CASE AGAINST TOMORROW by Frederik Pohl. *Bal-lantine Books, N. Y., \$2.00*

WHOEVER named the latest collection of Pohl's short stories deserves A for Aptitude.

Of these six yarns, half present the Peculiarly Pohl Utopia, that hellish paradise for the narrowest possible segment on which he seems to hold a patent.

"The Midas Plague" depicts a consumer civilization where social prestige is measured inversely by material possessions and our concepts of rich and poor are topsyturvied. "The Census Takers" and "My Lady Green Sleeves" are two further examples of Fearsome Futures.

Two shorter works are poor Pohl, but the quality of the longer stories brings the general level considerably above Good.

GALACTIC NEBULAE AND INTERSTELLAR MATTER by Jean Dufay. *Philosophical Library, N. Y., \$15.00*

IT has become the accepted theory that the exceedingly diffuse dust and gas of interstellar space are the building blocks of the Universe. The incredibly enormous quantities of this material that exist in the near-perfect vacuum of space have been calculated to exceed 50% of the total

weight of the Galaxy, despite its hundred billion suns!

The author, Director of the Lyon and Haute-Provence Observatories, has written a tome not meant for the layman, but easily read with benefit by anyone skipping the advanced mathematical formulae in order to explore a new aspect of astronomy.

THE SURVIVORS AND OTHERS by H. P. Lovecraft and August Derleth. Arkham House, Sauk City, Wisconsin, \$3.00

LIKE R. E. Howard, Lovecraft seemingly goes on forever; the two decades since their death are as nothing. In any event, they appear more prolific now than then. What with de Camp, Nyberg and Derleth avidly rooting out every scrap of their writings and expanding them into novels, there may never be an end to their posthumous careers.

Whether this is a good thing is a moot point. Lovecraft at his best could build a mood of horror unsurpassed; at his worst, he was laughable. Taking Lovecraft's fragmentary plot notes, Derleth generates unintended humor in most of his reconstructions. The exceptions are the two final entries, "The Shadow out of Space" and "The Lamp of Alhazred."

Having read Lovecraft's novel, *The Shadow out of Time*, in Asf

some twenty-one years ago and being no master of total recall, it appears to me to bear considerable resemblance to the Derleth refab. But, that aside, A. D. has done a commendable job with this one H. P. L.

The final story, "The Lamp of Alhazred," might aptly have been titled "Eulogy." Though named Ward Phillips, the hero is obviously H. P. L. and the yarn an idealized version of what poor Lovecraft's life and death should have been.

ROGUE IN SPACE by Fredric Brown. E. P. Dutton & Co., Inc., N. Y., \$2.75

PERHAPS the most endearing feature of Frederic Brown's art is his Puckish humor. I almost said Roguish but that would merely point up redundantly the failure of this novel. To summarize—

Crag, the pivotal character, is an unregenerate criminal who is framed for reasons and by persons unknown. The presiding judge at his trial was also his arbiter six years previously, when he went free though guilty, to the enraged disgust of the judge. Since then, Judge Olliver has risen very high in party circles, having been beaten out for American Coordinator, but polling a huge vote.

Crag discovers the reason for Olliver's interest in his case after

his conviction. During the usual closeting prior to sentencing, Oliver confides that he wants Crag to escape so that he can do a personal job for him. He offers Crag limited assistance, but a whopping million credits if he can steal a certain article. Crag is slated for the psycher, a sort of plastic surgery job on the ego, that will turn him into more palatable character. Conveniently, though, Oliver's wife, an edible redhead, is a psycher technician, so that takes care of that.

Olliver, by the way, is in cahoots with Crag because he wants to reestablish Democracy, now a naughty word, and the mysterious article that Crag is to steal will help him do it.

Oops. Almost forgot. Crag has a removable prosthetic right hand, weight 10 lbs., that enables him to throw (literally) a terrific right-hand punch.

But all this is pretty small potatoes because Brown has something really big in store. A sentient asteroid has blundered into the Solar System and has taken a shine

to this miserable criminal. It brings him back to life—it really *shouldn't* have bothered!—and, in general, acts moonstruck, if you'll pardon the expression.

All this might have been fine had Brown realized he was writing a funny story and treated it that way. He didn't.

THE EXPANDING CASE FOR THE UFO by M. K. Jessup. The Citadel Press, N. Y., \$3.50

JESSUP is the author of *The Case for the UFO*, *The UFO Annual*, and *UFO and the Bible*. His current book is further argument in his assertion that life abounds in space about us. He has assembled a weighty mass of data concerning the "mysterious" craters of the Moon—notably the well-documented and inexplicable disappearance of the crater Linné. He scoffs at our satellite program as amateurish compared to what we're up against. What should we do? Sit and wait for the experts to come down and show us how?

—FLOYD C. GALE

★ ★ ★ ★ ★

Carbon Copy

By CLIFFORD D. SIMAK

Illustrated by KLUGE





Being a scrupulous real estate agent and a devout angler, Homer Jackson knew a clean sale from a fish story—but not this time!

THE man who came into Homer Jackson's office was wearing his left shoe on his right foot and his right shoe on his left.

He gave Homer quite a start.

The man was tall and had a gangling look about him, but he was smartly dressed—except for his shoes. And his shoes were all right, too; it was just the way he wore them.

"Am I addressing Mr. Homer Jackson?" he asked with a formality to which Homer was entirely unaccustomed.

"That's me," said Homer.

He squirmed a bit uncomfortably in his chair. He hoped this wasn't one of Gabby Wilson's jokes.

Gabby had an office just down the hall and loved to pester Homer plenty. When Gabby cooked up a joke, he did a massive job on it; he left out not a single detail. And some of Gabby's jokes got pretty rough.

But the man seemed to be dead serious and perhaps a little anxious.

"Mr. Homer Jackson, the suburban realtor?" he persisted.

"That's right," said Homer.

"Specializing in lake properties and country acreages?"

"I'm your man," Homer began to feel uncomfortable. This man was spreading it on a trifle thick and Homer thought he could see Gabby's hand in it.

"I'd like to talk with you. I have a matter of small business."

"Fire away," said Homer, motioning toward a chair.

The man sat down carefully, bolt upright in the chair.

"My name is Oscar Steen," he said. "We're building a development on what is known as the Saunders place. We call it Happy Acres."

HOMER nodded. "I'm acquainted with the place. It's the last good holding on the lake. You were fortunate to get it."

"Thank you, Mr. Jackson. We think that it is nice."

"How are you getting on?"

"We have just finished it. But now comes the most important part. We must get people onto the property."

"Well," said Homer, "things are a little tough right now. Money has tightened up and the interest rates are higher and Washington is no help and besides that—"

"We wondered if you'd be interested in handling it for us."

Homer choked a little, but recovered quickly. "Well, now, I don't know. Those houses may be hard to sell. You'd have to get a solid figure for them and the prices will run high. That stone wall you put around the place and those fancy gates and all, I would suspect you have high-class houses. You have gone and made it into an exclusive section. There'll be only a certain class of buyer who might be interested."

"Mr. Jackson," said Steen, "we have a new approach. You won't have to sell them. We're only leasing them."

"Renting them, you mean."

"No, sir, leasing them."

"Well, it all comes out to the

same thing in the end. You'll have to get a lot for them."

"Five thousand."

"Five thousand is an awful lot of money. At least, out here it is. Five thousand a year comes to over four hundred a month and—"

"Not for a year," corrected Steen. "For ninety-nine."

"For what?"

"Ninety-nine. We're leasing at five thousand dollars for ninety-nine full years."

"But, man, you can't do that! Why, that's absolutely crazy! Taxes would eat up—"

"We're not so interested in making money on the houses as we are in creating business for our shopping center."

"You mean you have a shopping center in there, too?"

Steen allowed himself a smile. "Mr. Jackson, we obtain the property and then we build the wall to have some privacy so there can be no snoopers."

"Yes, I know," said Homer. "It's smart to do it that way. Good publicity. Whets the public's interest. Gives you a chance to have a big unveiling. But that twelve-foot wall—"

"Fourteen, Mr. Jackson."

"All right, then, fourteen. And it's built of solid stone. I know—I watched them put it up. And no one builds walls of solid stone any more. They just use stone

facing. The way you built that wall set you back a hunk—"

"Mr. Jackson, please. We know what we are doing. In this shopping center, we sell everything from peanuts to Cadillacs. But we need customers. So we build houses for our customers. We desire to create a good stable population of rather well-to-do families."

JUMPING to his feet in exasperation, Homer paced up and down the office.

"But, Mr. Steen, you can't possibly build up enough business at your shopping center by relying solely on the people in your development. For instance, how many houses have you?"

"Fifty."

"Fifty families are a mere drop in the bucket for a shopping center. Even if every one of those fifty families bought all their needs from you—and you can't be sure they will—but if they did, you'd still have little volume. And you won't pick up any outside trade—not behind that wall, you won't."

He stopped his pacing and went back to his chair.

"I don't know why I'm upset about it," he told Steen. "It's no skin off my nose. Yes, I'll handle the development, but I can't handle leasing at my usual five per cent."

"Oh, I forgot to tell you," said Steen. "You keep the entire five thousand."

Homer gasped like a fish hauled suddenly from water.

"On one condition," added Steen. "One has to be so careful. We have a bank, you see. Part of the shopping center service."

"A bank," Homer said feebly.

"Chartered under the state banking regulations."

"And what has a bank to do with me?"

"You'll take ten per cent," said Steen. "The rest will be credited to your account in the Happy Acres Bank. Every time you lease a unit, you get five hundred cash; forty-five hundred goes into your bank account."

"I don't quite see—"

"There are advantages."

"Yes, I know," Homer said. "It builds up your business. You're out to make that shopping center go."

"That might be one factor. Another is that we can't have you getting rich in front of all your friends and neighbors. There'd be too much talk about it and we don't want that kind of publicity. And there are tax advantages as well."

"Tax advantages?"

"Mr. Jackson, if you lease all fifty houses, you will have earned a quarter million dollars. Have

you ever figured what the income tax might be on a quarter million dollars?"

"It would be quite a lot."

"It would be a crying shame," said Steen. "The bank could be a help."

"I don't quite see how."

"You leave that to us. Leave everything to us. You just lease the houses."

"Mr. Steen, I've been an honest man for years in an occupation where there's opportunity—"

"Honesty, Mr. Jackson. Of course we know you're honest. That's why we came to you. Have you got your car here?"

"It's parked outside."

"Fine. Mine is at the station getting serviced. Let's drive out and look the houses over."

II

THE houses were all that anyone could wish. They were planned with practical imagination and built with loving care. There was, Homer admitted to himself, more honest workmanship in them than he had seen for many years in this era of mass-production building. They had that quiet sense of quality material, of prideful craftsmanship, of solidity, of dignity and tradition that was seldom found any more.

They were well located, all fifty of them, in the wooded hills that stretched back from the lake, and the contractor had not indulged in the ruthless slashing out of trees. Set in natural surroundings, with decent amounts of space around them, they stood, each one of them, in comparative privacy.

In the spring, there would be wild flowers, and in the autumn, the woods would flame with color and there would be birds and squirrels and rabbits. And there was a stretch of white sand beach, the last left on the whole lake.

Homer began mentally to write the ad he'd put in the Sunday paper and found that he looked forward with some anticipation to setting down the words. This was one he could pull out all the stops on, use all the purple prose he wanted.

"I like it, Mr. Steen," he said. "I think they won't be too hard to move."

"That is good," Steen replied. "We are prepared to give you an exclusive contract for a period of ten years. Renewable, of course."

"But why ten years? I can get this tract handled in a year or two, if it goes at all."

"You are mistaken. The business, I can assure you, will be continuing."

They stood on the brick walk in front of one of the houses and looked toward the lake. There were two white sails on the water, far toward the other shore, and a rowboat bobbed in the middle distance, with the black smudge of a hunched fisherman squatted in the stern.

Homer shook his head in some bewilderment. "I don't understand."

"There'll be some subletting," Steen told him smoothly. "When fifty families are involved, there are always some who move."

"But that's another story. Subletting—"

Steen pulled a paper from his pocket and handed it to Homer. "Your contract. You'll want to look it over. Look it over closely. You're a cautious man and that's the kind of man we want."

HOMER drove along the winding, wooded road back to the shopping center with Steen.

The center was a lovely place. It stretched along the entire south side of the property, backed by the fourteen-foot wall, and was a shining place of brand-new paint and gleaming glass and metal.

Homer stopped the car to look at it.

"You've got everything," he said.

"I think we have," said Steen proudly. "We've even got our own telephone exchange."

"Isn't that unusual?"

"Not at all. What we have set up here amounts to a model village, a model living space. We have our own water system and our sewage plant. Why not a telephone exchange?"

Homer let it pass. There was no sense arguing. It all was just this side of crazy, anyhow. No matter how fouled up it was, Steen seemed satisfied.

Maybe, Homer told himself, he knows what he is doing.

But Homer doubted it.

"One thing more," said Steen. "It is just a minor matter, but you should know about it. We have a car agency, you see. Many agencies, in fact. We can supply almost any make of car—"

"But how did you do—"

"We know our way around. Any make of car a person would want. And anyone who leases must buy a car from us."

"Mister," Homer said, "I've heard a lot of fast ones in the auto business, but this one beats them all. If you think I'll sell cars for you—"

"There's nothing wrong with it," said Steen. "We have some good connections. Any car one wants at a fair and honest price. And we are prepared to give good value on their trade-ins, too.

It would never do to have old rattletraps in a high-class development like this."

"And what else? I think you better tell me how many other tie-in deals you have."

"Not a single one. The automobile is all."

Homer put the car in gear and drove slowly toward the gate.

The uniformed gateman saw them coming and swung the gates wide open. He waved to them cheerily as they went past his kiosk.

III

"I WOULDN'T touch it with a ten-foot pole," Homer told his wife, Elaine, "if there weren't so much money in it. But things have been kind of slow with this higher interest rate and all and this deal would give me a chance—"

"If it's Mr. Steen wearing his shoes on the wrong feet," Elaine said, "I don't think you need to worry. You remember Uncle Eb?"

"Sure. He was the one who wore his vest inside out."

"Pure stubbornness, that's what it was with Uncle Eb. He put it on inside out one day and someone laughed at him. So Uncle Eb said that was the way to wear a vest. And that's the way he wore it to his dying day."

"Well, sure," said Homer, "that might be it, of course. But wearing a vest inside out wouldn't hurt your chest. Shoes on the wrong feet would hurt something terrible."

"This poor Mr. Steen might be a cripple of some sort. Maybe he was born that way."

"I never heard of anyone born with his right and left foot switched."

"It's queer, naturally," Elaine persisted, "but what difference does it make? If you lease all those houses, we can go to Europe like we've always planned. As far as I'm concerned, he can go barefoot if he wants."

"Yeah, I suppose so."

"And we need a car," Elaine said, beginning on her catalogue. "And drapes for the living room. And I haven't had a new dress in ages. And it's shameful to be using our old silver. We should have replaced it years ago. It's the old stuff Ethel gave us when we were married—"

"All right," said Homer. "If I lease the houses, if the deal holds up, if I don't get in jail—we'll go to Europe."

He knew when he was licked.

He read the contract carefully. It was all right. It said, in black and white, that he got the whole five thousand.

Maybe, he told himself, he should have a lawyer see it. Al

Congdon could tell him in a minute if it was ironclad. But he shrank from showing it. There seemed something sinful, almost shameful, about his getting all that money.

He checked on the Happy Acres Bank. A charter had been issued and all regulations had been met.

He checked on building permits and they were in order, too.

So what was a man to do?

Especially when he had a wife who had yearned loudly for ten years to go to Europe.

Homer sat down and wrote an ad for the real estate section of the Sunday paper. On second thought, he dismissed the purple prose that he had planned to use. He employed the low-key technique. The ad wasn't long. It didn't cost too much. It read:

\$4.16!!!!

WOULD YOU PAY ONLY \$4.16

a month to live in a house
that would sell for \$35,000
to \$50,000?

If so, call or see

JACKSON REAL ESTATE

*Specializing in Lake Property
and Country Acreages*

IV

THE first prospect was a man named H. F. Morgan. He came into the office early Sunday

morning. He was belligerent. He slammed the folded want ad section down on Homer's desk. He had ringed Homer's ad with a big red-pencil mark.

"This isn't true!" yelled Morgan. "What kind of come-on is this?"

"It's substantially true," Homer answered quietly. "That's what it figures out to."

"You mean I just pay \$4.16 a month?"

"Well," hedged Homer, "it's not quite as simple as all that. You lease it for ninety-nine years."

"What would I want with a house for ninety-nine years? I won't live that long."

"Actually, it's better than owning a house. You can live there a lifetime, just as if you owned the place, and there are no taxes and no maintenance. And if you have children, they can go on living there."

"You mean this is on the level?"

Homer emphatically nodded. "Absolutely."

"What's wrong with this house of yours?"

"There's nothing wrong with it. It's a new house among other new houses in an exclusive neighborhood. You have a shopping center just up the road that's as good as any city—"

"You say it's new?"

"Right. There are fifty houses.

You can pick out the one you want. But I wouldn't take too long to decide, because these will go like hot cakes."

"I got my car outside."

"All right," said Homer, reaching for his hat. "I'll take my car and show you the way. The houses are unlocked. Look at them and choose the one you want."

Out on the street, Homer got into his car and sat down on something angular. He cursed because it hurt. He lifted himself and reached down and picked up the thing he'd sat on.

It was nothing he had ever seen before and he tossed it to the other side of the seat. It was, he thought, something like one of those clip-together plastic blocks that were made for children, but how it had gotten in his car, he could not imagine.

HE wheeled out into the street and signalled for the Morgan car to follow.

There were Mrs. Morgan and Jack, a hell-raising eight-year-old, and Judy, a winsome five-year-old, and Butch, the Boxer pup. All of them, Homer saw, were taken by surprise at the sight of Happy Acres. He could tell by the way Mrs. Morgan clasped her hands together and by the way suspicion darkened Morgan's face. One could almost

hear him thinking that no one was crazy enough to offer a deal like this.

Jack and Butch, the pup, went running in the woods and Judy danced gaily on the lawn and, Homer told himself, he had them neatly hooked.

Homer spent a busy day. His phone was jammed with calls. House-hunting families, suspicious, half-derisive, descended on the office.

He did the best he could. He'd never had a crowd like this before.

He directed the house-hunting families out to Happy Acres. He patiently explained to callers that it was no hoax, that there were houses to be had. He urged all of them to hurry and make up their minds.

"They won't last long," he told them, intoning unctuously that most ancient of all real estate selling gimmicks.

After church, Elaine came down to the office to help him with the phone while he talked to the prospects who dropped in.

Late in the afternoon, he drove out to Happy Acres. The place was an utter madhouse. It looked like a homecoming or a state fair or a monster picnic. People were wandering around, walking through the houses. One had three windows broken. The floors were all tracked up. Water fau-

cets had been left running. Someone had turned on a hose and washed out a flowerbed.

He tried to talk with some of them, but he made no headway. He went back to the office and waited for the rush to start.

There wasn't any rush.

A few phone calls came in and he assured the callers it was on the level. But they were still hard to convince.

He went home beat.

He hadn't leased a house.

V

MORGAN was the first one who came back. He came back alone, early Monday morning. He was still suspicious.

"Look," he said, "I'm an architect. I know what houses cost. What's the catch?"

"The catch is that you pay five thousand cash for a ninety-nine-year lease."

"But that's no catch. That's like buying it. The normal house, when it stands a hundred years, has long since lost its value."

"There's another catch," said Homer. "The builder won't lease to you unless you buy a new car from him."

"That's illegal!" shouted Morgan.

"I wouldn't know. Nobody's forcing you to take the offer."

"Let's forget about the car for

the moment," Morgan urged. "What I want to know is, how can the builder put up a place like that for five thousand dollars? I know for a fact that he can't."

"So do I. But if he wants to lose a lot of money, who are we to stop him?"

Morgan pounded on the desk. "What's the gimmick, Jackson?"

"The builder wears his shoes on the wrong feet, if that means anything to you."

Morgan stared at him. "I think you're crazy, too. What would that have to do with it?"

"I don't know," said Homer. "I just mentioned it, thinking it might help you."

"Well, it doesn't."

Homer sighed. "It's got me puzzled, too."

Morgan picked up his hat and jammed it on his head. "I'll be seeing you," he said. It sounded like a threat.

"I'll be right here," said Homer as Morgan went slamming out the door.

Homer went down to the drug-store for a cup of coffee.

When he got back, a second visitor was waiting for him. The man sat stiffly in a chair and tapped nervous fingers on his briefcase, held primly in his lap. He looked as if he'd eaten something sour.

"Mr. Jackson," he said, "I rep-

resent the County Realtors Association."

"Not interested," said Homer. "I've gotten along for years without joining that outfit. I can get along a few years more."

"I'm not here to solicit membership. I am here about that ad of yours in the paper yesterday."

"Good ad, I thought. It brought in a lot of business."

"It's exactly the kind of advertising that our association frowns upon. It is, if you will pardon the expression, nothing but a come-on."

"Mr.—by the way, what is your name?"

"Snyder," said the man.

"Mr. Snyder, if you happen to be in the market for a place out in this area at the ridiculously low cost of \$4.16 a month, I shall be glad to show you any one of fifty houses. If you have a moment, I can drive you out."

THE man's mouth snapped together like a trap. "You know what I mean, Jackson. This is fraudulent advertising and you know it is. It is misrepresentation. We mean to show it is."

Homer pitched his hat on top of the filing cabinet and sat down in his chair.

"Snyder," he said, "you're cluttering up the place. You've done your duty—you've warned me. Now get out of here."

It wasn't exactly what he had meant to say and he was surprised at himself for saying it. But now that it was said, there was no way of recalling it and he rather liked the feel of strength and independence that it gave him.

"There is no use flying off the handle," said Snyder. "We could talk this over."

"You came in and made your threat," Homer retorted. "There's nothing to talk over. You said you were going to get me, so come ahead and get me."

Snyder got to his feet savagely. "You'll regret this, Jackson."

"Maybe so," admitted Homer. "Sure you don't need a house?"

"Not from you," said Snyder, and went stalking out.

Must have hurt their weekend sales, Homer told himself, watching Snyder go stumping down the street.

He sat quietly, thinking. He'd known there would be trouble, but there had been no way he could have passed up the deal. Not with Elaine set on that trip to Europe.

And now he was committed. He could not back out even if he wished. And he wasn't sure that he wanted to. There could be a lot of money in it.

The car deal he didn't like, but there was nothing he could

do about it. And by handling it right, he might keep in the clear. Maybe, he thought, he should go out and talk to Steen about it.

Gabby Wilson, his insurance-selling neighbor down the hall, came in and flopped into a chair. Gabby was a loud-mouth.

"Howsa boy?" he yelled. "Hear you got that Happy Acres deal. How's about cutting in your old pal on the insurance end?"

"Go chase yourself," invited Homer irritably.

"Heard a good story the other day. It seems this wrecking outfit got a job to tear down a building. And the straw boss got his orders wrong and tore down another building." Gabby slapped his knee and roared with laughter. "Can you imagine the look on that contractor's face when he heard the news?"

"It cost him a lot of money," Homer said. "He had a right to be good and sore."

"You don't think it's funny?"

"No, I don't."

"How you getting on with this Happy Acres gang?"

"Fine, so far," said Homer.

"Cheap outfit," Gabby told him. "I been checking round. They got some two-bit contractor from out in the sticks somewhere to do the job for them. Didn't even buy their material from the dealers here. The contractor brought his own crew with him.

The developers didn't spend a nickel locally."

"Unpatriotic of them."

"Not smart, either. Houses probably will fall down in a year or two."

"I don't care particularly. Just so I get them leased."

"Do anything so far?"

"Got some interest in them. Here comes a prospect now."

It was Morgan. He had parked in front and was getting out of a new and shiny car, agleam with chrome.

Gabby beat a swift retreat.

Morgan came into the office. He sat down in a chair and pulled out his checkbook.

"I bought the car," he said. "How do you want this check made out?"

VI

SIX weeks later, Homer dropped in at the shopping center office. Steen was sitting with his feet up on the desk. He was wearing black shoes instead of the brown ones he had worn before. They still were on the wrong feet.

"Howdy, Mr. Jackson," he said easily.

Homer sat down in a chair. "I finally got rid of them. All the fifty houses are leased."

"That's fine." Steen reached into a drawer, took out a small

book and tossed it across the desk to Homer. "Here. This belongs to you."

Homer picked it up. It was a bank book. He opened it and saw a neat row of \$4,500 entries marching down the page.

"You made yourself a mint," said Steen.

"I wish I had fifty more," Homer told him. "Or two hundred more. This thing is catching on. I could lease them in a week. I've got a waiting list longer than my arm."

"Well, why don't you go ahead and lease them?"

"I can't lease them a second time."

"Funny thing," said Steen. "There's no one living in those houses. They all are standing empty."

"But that can't be!" objected Homer. "There might be a few still empty—a few that the people haven't occupied yet. But most of them have moved in. They're living in those houses."

"That's not the way it looks to me."

"What's happened to those people then? Where have they—"

"Mr. Jackson!"

"Yes?"

"You haven't trusted me. You didn't trust me from the start. I don't know why. You thought the deal was queer. You were scared of it. But I've played

fair with you. You'll have to admit I have."

Homer stroked the bank book. "More than fair."

"I know what I am doing, Mr. Jackson. I'm not anybody's fool. I have the angles figured out. String along with me. I need a man like you."

"You mean lease all those houses a second time!" Homer asked uneasily.

"A SECOND time," said Steen. "And a third. And fourth. Lease them as often as you like. Keep right on leasing them. No one will mind at all."

"But the people will mind—the people that I lease those houses to," Homer pointed out.

"Mr. Jackson, let me handle this. Don't you worry about a solitary thing. You just keep those houses moving."

"But it isn't right."

"Mr. Jackson, in some six weeks' time, you've made a quarter million dollars. I suppose that's what's wrong with you. I suppose you figure that's enough—"

"Well, no. With income tax and all—"

"Forget the income tax. I told you that this bank of ours had tax advantages."

"I don't get it," Homer said. "This is no way to do business."

"But it is," said Steen. "I chal-

lenge you to find a better way to do business. There's no end to it. You can become a multi-millionaire—"

"In jail."

"I've told you we weren't doing wrong. If you don't want to handle it—"

"Let me think it over," Homer pleaded. "Give me a day or two."

"Noon tomorrow," said Steen decisively. "If you don't tell me you are willing to go ahead by noon tomorrow, I'll look for someone else."

Homer got up. He thrust the bank book in his pocket. "I'll be in to see you."

Steen put his feet back on the desk. "Fine. I'll be expecting you."

Out on the concourse, Homer walked along the gleaming shop fronts. And the shops, he saw, were no more than half-staffed and entirely innocent of buyers. He went into a drugstore to buy a cigar and was waited on by a girl of just slightly more than high school age. He failed to recognize her.

"You live around here?" he asked.

"No, sir. In the city."

He went into a hardware store and into a grocery supermarket. He saw no one he knew. And that was queer. He'd lived in the area for almost thirteen years and thought he knew everyone.

He recalled what Gabby had said about the contractor from somewhere out of town. Maybe, for some zany reason, Steen had a policy against employing local people. Still, he'd employed Homer.

IT was a crazy setup, Homer told himself. None of it made sense—and least of all, the leasing of the houses a second time around.

Perhaps he should get out of it. He'd made a fair amount of money. Right now, most likely, he could get out slick and clean. If he stayed, there might be trouble.

He lighted up the cigar and went back to his car. Wheeling out of the parking lot, he headed for the road that led into the housing development.

He drove slowly, looking closely at each house. All of them seemed empty. The windows stared blindly without drapes or curtains. The lawns had not been cut for weeks. There was no sign of anyone—and there should be children and pets playing. Almost everyone he'd leased to had had children and dogs and cats. The place should be jumping, he told himself, and instead it was silent and deserted.

He stopped the car and went into a house. It was bare and empty. There was sawdust in the

corners and wood shavings here and there. There were no scuff marks on the floor, no handprints on the wall. The windows had not been washed; the trademark paper still was sticking to them.

He went out puzzled.

He inspected two more houses. They were the same.

Steen had been right, then. Steen, with his shoes on the wrong feet, and with something else—with his different way of talking now. Six weeks ago, when Steen had come into Homer's office, he had been stiff and formal, awkward, yet striving for preciseness. And now he was easy in his manner, now he put his feet up on the desk, now he talked slangily.

There was no one living in the houses, Homer admitted to himself. No one had ever lived in them. He had leased all fifty of them and no one had moved in.

And it had a fishy smell—it had a terribly fishy smell.

On his way out, he stopped at Steen's office. The place was locked up.

The old gateman opened the gate and waved at him from the window of his kiosk.

BACK in his own office, Homer took out of a drawer the list of leases he had drawn. He phoned Morgan, the first name on the lease.

"That number has been changed," the operator told him. She gave him the new number and he dialed it.

"Happy Acres," said a sing-song operator-voice.

"Huh?"

"Happy Acres," the voice sang. "Whom did you wish, sir?"

"The Morgan residence."

He waited and it was Morgan who answered.

"Homer Jackson. Just checking. How do you like the house? Are you getting on okay?"

"Perfectly," Morgan told him happily. "I've been meaning to come in and thank you for putting me onto this."

"Everything is really all right?"

"Couldn't be better. I hardly ever go into my office now. I stay out here and work in the amusement room. I go fishing and I take walks. The wife and kids are just as pleased as I am." Morgan lowered his voice. "How do you guys manage this? I've tried to get it figured out and I can't."

"It's a secret," Homer replied, thinking on his feet. "The answer to the housing problem."

"Not that I care," Morgan said. "Just curious, you know. I'll be dropping in one day. I'll bring you something."

"Glad to see you," said Homer.

He called the Happy Acres number and asked for another family. He went halfway through

the list. He talked mostly to the women, although some of the men were home. They were not only happy, but enthusiastic. They asked him jokingly how he got away with it.

When he finished, he was glassy-eyed.

He went down to the drugstore for a cup of coffee.

When he returned, he'd made up his mind.

He took out his waiting list and began making calls.

"There just happens to be a vacancy in Happy Acres if you are interested."

They were.

He reminded them about the cars. They said they'd take care of that matter first thing in the morning.

By suppertime, he'd leased twenty of the houses by making twenty phone calls.

VII

"THERE'S something wrong," Homer said to his wife. "But there's money in it."

"It's just that you don't understand," said Elaine. "There may be a perfectly good reason why Mr. Steen can't explain it all to you."

"But it means we have to give up our trip to Europe. And after we had got our passports and all."

"We can go to Europe later. You'll never get a chance like this again."

"It worries me," said Homer.

"Oh, you're always worried over things that never even happen. Mr. Steen is satisfied and the people you have leased to are, so why are you worrying?"

"But where are these people? They aren't living in the houses and yet they talk as if they were. And some of them asked me how I got away with it or words to that effect. They asked it as if they admired me for being slick in some kind of shady deal, and if it turns out that I am smart, I'd like to know just how I managed—"

"Forget it," Elaine said. "You aren't smart and you never were. If I didn't keep behind you, pushing all the time—"

"Yes, dear," said Homer. He'd heard it all before.

"And quit your worrying."

He tried to, but he couldn't.

The next morning, he drove to Happy Acres and parked across the road from the gate. From 7 o'clock until 9, he counted 43 cars coming out of the development. Some of the people in them he recognized as those he had leased the houses to. Many of them waved to him.

At 9:30, he drove in through the gate and went slowly down the road.

The houses still were empty.

When he got back to the office, there were people waiting for him. The block was clogged with cars that gleamed with newness.

He did a rushing business. No one, it turned out, was interested in seeing the houses. Most of them had seen them earlier. All they wanted was a lease. He filled out the forms as rapidly as he could and raked in the checks and cash.

Some other people showed up. Word had got around, they said, that there were vacancies in the Happy Acres tract. Yes, he said, there were. Just a few of them. He reminded them about the cars.

The last man in line, however, did not want to lease a house.

"My name is Fowler," he said. "I represent the Contractors and Builders Association. Maybe you can help me."

"I've got another house, if that is what you want," said Homer.

"I don't need a house. I have one, thanks."

"Pay you to sell it and get in on this deal. The newest thing in housing. A completely new concept."

FOWLER shook his head. "All I want to know is, how do I get hold of Steen?"

"No trouble at all," said Homer. "You just go out to Happy Acres. He has an office there."

"I've been out there a dozen times. He is never in. Usually the office is locked."

"I never have any trouble finding him, although I don't see him often. I'm too busy handling the property."

"Can you tell me how he does it, Mr. Jackson?"

"How he does what? How he is always out?"

"No. How he can sell a house for five thousand dollars."

"He doesn't sell. He leases."

"Don't pull that one on me. It's the same as selling. And he can't build for anywhere near that kind of money. He's losing a good twenty thousand or more on every house out there."

"If a man wants to lose his money—"

"Mr. Jackson," said Fowler, "that is not the point at all. The point is that it's unfair competition."

"Not if he leases," Homer pointed out. "If he sold, it might be."

"If this keeps on, it'll put every contractor in the area out of business."

"That," said Homer, "would be no more than simple justice in a lot of cases. They throw up a shack with plenty of glitter and charge a fancy price and—"

"Nevertheless, Mr. Jackson, none of them intend to be put out of business."

"And you're going to sue," guessed Homer.

"We certainly intend to."

"Don't look at me. I only lease the places."

"We intend to get out an injunction against your leasing them."

"You make the second one," Homer informed him, annoyed.

"The second what?"

"The real estate boys sent a guy like you out here several weeks ago. He made a lot of threats and nothing's happened yet. He was bluffing, just like you."

"Let me set your mind at rest," said Fowler. "I'm not doing any bluffing."

He got up from his chair and stalked stiffly out.

Homer looked at his watch. It was long past lunchtime. He went down to the drugstore for a sandwich and a cup of coffee. The place was empty and he had the counter to himself.

He sat hunched over the lunch and thought about it, trying to get all the queer goings-on straightened out into some sort of logic. But the only thing he could think about was that Steen wore his shoes on the wrong feet.

WEARILY, still worried, Homer went back to the office. There were people waiting with their new cars parked out-

side. He leased houses right and left.

Apparently the word was spreading. The house-seekers drifted in all afternoon. He leased four more houses before it was time to close.

It was funny, he thought, very, very funny how the word had got around. He hadn't advertised in the last three weeks and they still were coming in.

Just as he was getting ready to lock up, Morgan strode in breezily. He had a package underneath his arm.

"Here you are, pal," he said. "I told you I'd bring you something. Caught them just an hour or two ago."

The package was beginning to get soggy. Homer took it gingerly.

"Thanks very much," he said in a doubtful voice.

"Think nothing of it. I'll bring you more in a week or two."

As soon as Morgan left, Homer closed the blinds and unwrapped the package warily.

Inside were brook trout—trout fresh-caught, with the ferns in which they had been wrapped not even wilting yet.

And there was no trout stream closer than a couple of hundred miles!

Homer stood and shivered. For there was no point in pretending ignorance, no point in repeating smugly to himself that it was all

right. Even at five thousand a deal, there still was something wrong—very badly wrong.

He had to face it. They were beginning to close in on him. Fowler had sounded as if he might mean business and the Real Estate Association undoubtedly was lying in ambush, waiting for him to make one little slip. And when he made that slip, they'd snap the trap shut.

To protect himself, he had to know what was going on. He could no longer go at it blind.

Knowing, he might be able to go on. He might know when to quit. And that time, he told himself, might have been as early as this afternoon.

He stood there, with the fish and ferns lying in the wet wrapping paper on the desk, and envisioned a long street of houses, and behind that long street of houses, another identical street of houses, and behind the second street, another—street after street, each behind the other, each exactly like the other, fading out of sight on a flat and level plain.

AND that was the way it must be—except there was no second street of houses. There was just the one, standing lone and empty, and yet, somehow, with people living in them.

Lease them a second time, Steen had said, and a third time

and a fourth. Don't you worry about a thing. Let me handle it. Leave the worry all to me. You just keep on leasing houses.

And Homer leased one house and the people moved, not into the house he'd leased them, but into the second identical house immediately behind it, and he leased the first house yet again and the people moved into the third, also identical, also directly behind the first and second house, and that was how it was.

Except it was just a childish thing he had dreamed up to offer an explanation—any explanation—for a thing he couldn't understand. A fairy tale.

He tried to get the idea back on the track again, tried to rationalize it, but it was too weird.

A man could trust his sense, couldn't he? He could believe what he could see. And there were only fifty houses—empty houses, despite the fact that people lived in them. He could trust his ears and he had talked to people who were enthusiastic about living in those empty houses.

It was crazy, Homer argued with himself. All those other folks were crazy—Steen and all the people living in the houses.

He wrapped up the fish and retied the package clumsily. No matter where they came from, no matter what lunacy might prevail, those trout surely would

taste good. And that, the taste of fresh-caught trout, was one of the few true, solid things left in the entire world.

There was a creaking sound and Homer jumped in panic, whirling swiftly from the desk.

The door was being opened! He'd forgotten to lock the door!

The man who came in wore no uniform, but there was no doubt that he was a cop or detective.

"My name is Hankins," he said. He showed his badge to Homer.

Homer shut his mouth tight to keep his teeth from chattering.

"I think you may be able to do something for me," Hankins said.

"Surely," Homer chattered. "Anything you say."

"You know a man named Dahl?"

"I don't think I do."

"Would you search your records?"

"My records?" Homer echoed wildly.

"Mr. Jackson, you're a businessman. Surely you keep records—the names of persons to whom you sell property and other things like that."

"Yes," said Homer, all in a rush. "Yes, I keep that sort of record. Of course. Sure."

WITH shaking hands, he pulled out a desk drawer and brought out the folder he'd

set up on Happy Acres. He looked through it, fumbling at the papers.

"I think I may have it," he said. "Dahl, did you say the name was?"

"John H. Dahl," said Hankins.

"Three weeks ago, I leased a house in Happy Acres to a John H. Dahl. Do you think he might be the one?"

"Tall, dark man. Forty-three years old. Acts nervous."

Homer shook his head. "I don't remember him. There have been so many people."

"Have you one there for Benny August?"

Homer searched again. "B. J. August. The day after Mr. Dahl."

"And perhaps a man named Drake? More than likely signs himself Hanson Drake."

Drake was also there.

Hankins seemed well pleased. "Now how do I get to this Happy Acres place?"

With a sinking feeling, Homer told him how.

He gathered up his fish and walked outside with Hankins. He stood and watched the officer drive away. He wouldn't want to be around, he suspected, when Hankins returned from Happy Acres. He hoped with all his heart that Hankins wouldn't look him up.

He locked up the office and went down to the drugstore to

buy a paper before going home.

He unfolded it and the headlines leaped at him:

THREE HUNTED IN STOCK SWINDLE

Three photographs on column cuts were ranged underneath the headline. He read the names in turn. Dahl, August, Drake.

He folded the paper tightly and thrust it beneath his arm and he felt the sweat begin to trickle.

Hankins would never find his men, he knew. No one would ever find them. In Happy Acres, they'd be safe. It was, he began to see, a ready-made hideout for all kinds of hunted men.

He wondered how many of the others he had leased the houses to might be hunted, too. No wonder, he thought, the word had spread so quickly. No wonder his office had been filled all day with people who'd already bought the cars.

And what was it all about? How did it work? Who had figured it all out?

And why did he, Homer Jackson, have to be the one who'd get sucked into it?

Elaine took a searching look at him as he came in the door.

"You've been worrying," she scolded.

Homer lied most nobly. "Not

worrying. Just a little tired."

Scared to death would have been closer to the truth.

IX

AT 9 o'clock next morning, he drove to Happy Acres. He was inside the door before he saw that Steen was busy. The man who had been talking to Steen swung swiftly from the desk.

"Oh, it's you," he said.

Homer saw that the man was Hankins.

Steen smiled wearily. "Mr. Hankins seems to think that we're obstructing justice."

"I can't imagine," Homer said, "why he should think that."

Hankins was on the edge of rage. "Where are these people? What have you done with them?"

Steen said: "I've told you, Mr. Hankins, that we only lease the property. We cannot undertake to go surety for anybody who may lease from us."

"You've hidden them!"

"How could we hide them, Mr. Hankins? Where could we hide them? The entire development is open to you. You can search it to your heart's content."

"I don't know what is going on," said Hankins savagely, "but I'm going to find out. And once I do, both of you had better have your explanations ready."

"I think," Steen commented, "that Mr. Hankins' determination and deep sense of duty are very splendid things. Don't you, Mr. Jackson?"

"I do, indeed," said Homer, at loss as to what to say.

"You'll be saying that out of the other side of your mouth before I'm through with you," Hankins promised them.

He went storming out the door.

"What a nasty man," Steen remarked, unconcerned.

"I'm getting out," said Homer. "I've got a pocket full of checks and cash. As soon as I turn them over, I am pulling out. You can find someone else to do your dirty work."

"Now I am sorry to hear that. And just when you were doing well. There's a lot of money to be made."

"It's too risky."

"I grant you that it may appear a little risky, but actually it's not. Men like Hankins will raise a lot of dust, but what can they really do? We are completely in the clear."

"We're leasing the same houses over and over again."

"Why, certainly," said Steen. "How else would you expect me to build up the kind of clientele I need to give me business volume in this shopping center? You yourself have told me that fifty families were by no means

enough. And you were right, of course. But you lease the houses ten times and you have five hundred families, which is not bad. Lease each one a hundred times and you have five thousand—And incidentally, Mr. Jackson, by the time you lease each of them a hundred times, you will have made yourself twenty-five million dollars, which is not a bad amount for a few years' work.

"Because," Steen concluded, "you see, despite what you may have thought of me, I'm squarely on the level. I gave you the straight goods. I told you I was not interested in money from the houses, but merely from the shopping center."

HOMER tried to pretend that he was unimpressed. He kept on emptying checks and wads of money from his pockets. Steen reached out for the checks and began endorsing them. He stacked the money neatly.

"I wish you would reconsider, Mr. Jackson," he urged. "I have need of a man like you. You've worked out so satisfactorily, I hate to see you go."

"Come clean with me," said Homer, "and I might stay. Tell me all there is to tell—how it all works and what all the angles are and what you plan to do."

Steen laid a cautionary finger across his lips. "Hush! You don't

know what you're asking."

"You mean you see no trouble coming?"

"Some annoyance, perhaps. Not real trouble."

"They could throw the book at us if they could prove we were hiding people wanted by the law."

Steen sighed deeply. "Mr. Jackson, how many fugitives have you sheltered in the last six weeks?"

"Not a one," said Homer.

"Neither have I," Steen spread his arms wide. "So we have nothing to fear. We've done no wrong. At least," he amended, "none that they can prove."

He picked up the money and the checks and handed them to Homer.

"Here," he said, "You might as well take it to the bank. It's your money."

Homer took the money and the checks and stood with them in his hand, thinking about what Steen had said about not doing any wrong. Maybe Steen was right. Maybe Homer was getting scared when there was no need to be.

What could they be charged with?

Fraudulent advertising? There had been no specific claims that had not been performed.

For tying in the auto sales? Just possibly, although he had

not made an auto sale a condition of transaction; he had merely mentioned that it would be very nice if they bought a car from Happy Acres Auto Sales.

For selling at less than cost? Probably not, for it would be a fine point of law to prove a lease a sale. And selling or leasing below cost in any case was no crime.

For leasing the same house more than once? Certainly not until it could be proved that someone had suffered damage and it was most unlikely that it could be proved.

For doing away with people? But those people could be reached by telephone, could drive out through the gate. And they were well and happy and enthusiastic.

"Perhaps," Steen said gently, "you have changed your mind. Perhaps you'll stay with us."

"Perhaps I will," said Homer.

HE walked down the concourse to the bank. It was an impressive place. The foyer was resplendent in coppery metal and with brightly polished mirrors. There were birds in hanging cages and some of the birds were singing.

There were no customers, but the bank was spic and span. An alert vice-president sat behind his polished desk without a thing to

do. An equally alert teller waited shiny-faced behind the wicked window.

Homer walked to the window and shoved through the money and the checks. He took his passbook from his pocket and handed it across.

The teller looked at it and said, "I'm sorry, Mr. Jackson, but you have no account with us."

"No account!" cried Homer. "I have a quarter of a million!"

His heart went plunk into his boots, and if he'd had Steen there, he'd have broken him to bits.

"No," said the teller calmly, "you've made an error. That is all."

"Error!" gasped Homer, hanging onto the window to keep from keeling over.

"An understandable error," the teller said sympathetically. "One that anyone could make. Your account is not with us, but with the Second Bank."

"Second Bank," wheezed Homer. "What are you talking about? This is the only bank there is."

"Look, it says Second Bank right here." He showed Homer the passbook. It did say Second Happy Acres State Bank.

"Well, now," said Homer, "that's better. Will you tell me how I get to this Second Bank?"

"Gladly, sir. Right over there. Just go through that door."

He handed back the passbook and the money.

"That door, you say?" inquired Homer.

"Yes. The one beside the drinking fountain."

Homer clutched the passbook and the money tightly in his hand and headed for the door. He opened it and stepped inside and got it shut behind him before he realized that he was in a closet.

It was just a tiny place, not much bigger than a man, and it was as black as the inside of a cat.

Sweat started out on Homer and he searched frantically for the doorknob and finally found it.

He pushed the door open and stumbled out. He strode wrathfully back across the foyer to the teller's window. He rapped angrily on the ledge and the teller turned around.

"What kind of trick is this?" yelled Homer. "What do you think you're pulling? What is going on here? That is nothing but a closet."

"I'm sorry, sir," the teller said. "My fault. I forgot to give you this."

He reached into his cash drawer and handed Homer a small object. It looked for all the world like the replica of a bizarre radiator ornament.

JUGGLING the object in his hand, Homer asked, "What has this got to do with it?"

"Everything," the teller said. "It will get you to the Second Bank. Don't lose it. You'll need it to get back."

"You mean I just hold it in my hand?"

"That is all you do, sir," the teller assured him.

Homer went back to the door, still unconvinced. It was all a lot of mumbo-jumbo, he told himself. These guys were just the same as Gabby Wilson—full of smart pranks. And if that teller was making a fool of him, he promised himself, he'd mop up the floor with him.

He opened the door and stepped into the closet, only it was no closet. It was another bank.

The metal still was coppery and the mirrors were a-glitter and the birds were singing, but there were customers. There were three tellers instead of the single one in the first bank and the bland, smooth vice-president at his shiny desk was industriously at work.

Homer stood quietly just outside the door through which he'd come from the other bank. The customers seemed not to have noticed him, but as he looked them over, he was startled to discover that there were many

whose faces were familiar.

Here, then, were the people who had leased the houses, going about their business in the Second Bank.

He put the miniature radiator ornament in his pocket and headed for the window that seemed to be least busy. He waited in line while the man ahead of him finished making a deposit.

Homer could only see the back of the man's head, but the head seemed to be familiar. He stood there raking through the memories of the people he had met in the last six weeks.

Then the man turned around and Homer saw that it was Dahl. It was the same face he had seen staring at him from the front page of the paper only the night before.

"Hello, Mr. Jackson," said Dahl. "Long time no see."

Homer gulped. "Good day, Mr. Dahl. How do you like the house?"

"Just great, Mr. Jackson. It's so quiet and peaceful here, I can't tear myself away from it."

I bet you can't, thought Homer.

"Glad to hear you say so," he said aloud, and stepped up to the window.

The teller glanced at the pass-book. "Good to see you, Mr. Jackson. The president, I think,

would like to see you, too. Would you care to step around after I finish your deposit?"

HOMER left the teller's window, feeling a little chilly at the prospect of seeing the president, wondering what the president might want and what new trouble it portended.

A hearty voice told him to come when he knocked on the door.

The president was a beefy gentleman and extremely pleasant.

"I've been hoping you'd come in," he said. "I don't know if you realize it or not, but you're our biggest depositor."

He shook Homer's hand most cordially and motioned him to a chair. He gave him a cigar and Homer, a good judge of tobacco, figured it for at least a fifty-center.

The president, puffing a little, sat down behind his desk.

"This is a good setup here," said Homer, to get the conversation started.

"Oh, yes," the president said. "Most splendid. It's just a test, though, you know."

"No, I hadn't known that."

"Yes, surely. To see if it will work. If it does, we will embark on much bigger projects — ones that will prove even more economically feasible. One never

knows, of course, how an idea will catch on. You can run all the preliminary observations and make innumerable surveys and still never know until you try it out."

"That's true," said Homer, wondering what in the world the president was talking about.

"Once we get it all worked out," the president said, "we can turn it over to the natives."

"I see. You're not a native here?"

"Of course not. I am from the city."

And that, thought Homer, was a funny thing to say. He watched the man closely, but there was nothing in his face to indicate that he had misspoken — no flush of embarrassment, no sign of flurry.

"I'm especially glad to have a chance to see you," Homer told him. "As a matter of fact, I had been thinking of switching my account and —"

The president's face took on a look of horror. "But why? Certainly you've been told about the tax advantages."

"I think that the matter got some mention. But, I must confess, I don't understand."

"Why, Mr. Jackson, it is simple. No mystery at all. So far as the authorities of your country are concerned —"

"My country?"

"Well, of course. I think it might logically be argued, even in a court of law, that this place we're in is no longer the United States of America. But even if it should be a part of your great nation — I doubt that such a contention would hold up if put to the decision — why, even so, our records are not available to the agents of your country. Don't tell me you fail to see the implications of a situation such as that."

"The income tax," Homer said.

"Correct," said the president, smiling very blandly.

"That is interesting. Interesting, indeed." Homer rose and held out his hand to the president. "I'll be in again."

"Thank you," said the president. "Drop in any time you wish."

ON the street outside the bank, the sun was shining brightly. The shopping center stretched along the mall and there were people here and there, walking on the concourse or shopping in the stores. A few cars were parked in the lot and the world of this Second Bank looked exactly like the First Bank's world, and if a man had not known the difference —

Good Lord, thought Homer, what was the difference? What had really happened? He'd walked through the door and there was



the other bank. He'd walked through a door and found the missing people — the people who had not been living in the empty houses of the First Bank's world.

Because that other world where the houses still stood empty was no more than a show window? It might simply be a street lined with demonstration homes. And here was that second street of houses he'd dreamed up the other night. And beyond this second street, would there be another street and another and another?

He stumbled along the concourse, shaken, now that he realized there really was that second street of houses. It was an idea that was hard to take in stride. He didn't take it in his stride. His mind balked and shied away from it and he told himself it wasn't true. But it was true and there was no way to rationalize it, to make it go away.

There was a second street!

He walked along and saw that he was near the gate. The gate, he saw, was the same as ever, with its expanse of massive iron. But there was no gateman.

And a car was coming up the road, heading directly for the gate, and it was moving fast, as if the driver did not see the gate.

Homer shouted and the car kept on. He started to run, waving his arms, but the driver paid not the least attention.

The crazy fool, thought Homer. He'll hit the gate and —

And the car hit the gate, slammed into it, but there was no sound, no crash, no screech of rending metal. There was simply nothing.

The gate was there, undented. And there was no car. The car had disappeared.

Homer stalked the gate.

Ten feet away, he stopped.

The road came up to the gate; beyond it was no road. Beyond the gate was wilderness. The road came up and ended and the wilderness began.

Cautiously, Homer walked out into the road and peered through the gate.

Just a few feet away, a giant oak towered into the air and behind it was the forest, wild and hoary and primeval, and in the forest was the happy sound, the abandoned sound of water running in a brook.

Fish, thought Homer. Maybe that brook is where the trout came from.

HE moved toward the gate for a closer look and reached out his hands to grasp the ironwork. Even as he did, the forest went away and the gate as well as he stood in the old familiar entrance to Happy Acres, with the gate wide open, with the state highway running along the wall and

the road from the development running out to meet it.

"Good morning, sir," said the gateman. "Maybe you ought to move over to one side. A car is apt to hit you."

"Huh?" Homer asked blankly.

"A car. This is a road, you know."

Homer turned around and brushed past the gateman. He hustled down the concourse, aiming for Steen's office.

But the office was locked. Homer shook the door. He rapped wildly on the glass. He pounded on the frame. Absolutely nothing happened.

Turning from the door, he stared out across the development with incredulous eyes — the vacant concourse, the empty houses among the trees, the faint patches of shining lake peeking through the clearings.

He jammed his hands into his pockets and his fingers touched the little radiator ornament. He took it out and looked at it. He'd seen it before — not the little replica, but the ornament itself.

He had seen it, he remembered, on the new cars parked outside his office by the people seeking leases. He had seen it on the car that had crashed the gate and disappeared.

He walked slowly to the parking lot and drove home.

"I don't think I'll go back to

the office today," he told Elaine. "I don't feel so good."

"You've been working too hard," she told him accusingly. "You look all worn out."

"That's a fact," he admitted.

"After lunch, you lie down. And see that you get some sleep."

"Yes, dear," he said.

SO it began to fall into a pattern, he thought, lying on his bed and staring at the ceiling. Finally it was clear enough so a man could begin to make some head and tail of it.

It was unbelievable, but there was no choice — one could not disbelieve in it. It was there to see. And if one looked at it any other way, it made no sense at all.

Someone — Steen, perhaps, or maybe someone else for whom Steen was serving as a front — had found out how to build one house, yet have many houses, houses stretching back street after street from the first house, all shadows of the first house, but substantial just the same — substantial enough for families to live in.

Dimensional extensions of that first house. Or houses stretching into time. Or something else as weird.

But however they might do it, it was a swell idea. For you could build one house and sell it, or lease it, time and time again. Ex-

cept that one was crazy to get hold of an idea that was as good as that and then let someone else make all the money from the leasing of the houses.

And there was no question that Steen was crazy. That idea he had about the shopping center was completely batty — although, stop to think of it, if one had five thousand houses and leased each of them ten times and had a monopoly on all the shops and stores — why, it would pay off tremendously.

And the bank president's slant on sovereignty had certain angles, too, that should not be overlooked.

A new idea in housing, Steen had told him. It was all of that. It was a new idea that would apply to many things — to industry and farming and mining and a lot of other ventures. A man could make one car and there would be many others. A man could build a manufacturing plant and he would have many plants.

It was like a carbon copy, Homer thought — an economic carbon copy. And a man apparently could make as many carbons as he wished. Possibly, he speculated, once you knew the principle, there was no limit to the carbons. Possibly the ghostly parade of Happy Acres house stretched limitless, forever and

forever. There might be no end to them.

He fell asleep and dreamed of going down a line of ghostly houses, counting them frantically as he ran along, hoping that he'd soon get to the end of them, for he couldn't quit until he did get to the end. But they always stretched ahead of him, as far as he could see, and he could find no end to them.

He woke, damp with perspiration, his tongue a dry and bitter wad inside a flannel mouth. He crept out of bed and went to the bathroom. He held his head under a cold faucet. It helped, but not much.

DOWNSTAIRS, he found a note that Elaine had propped against the radio on the breakfast table: *Gone to play bridge at Mabel's. Sandwiches in refrigerator.*

It was dark outside. He'd slept the daylight hours away. A wasted day, he berated himself — a completely wasted day. He hadn't done a dollar's worth of work.

He found some milk and drank it, but left the sandwiches where they were.

He might as well go to the office and get a little work done, compensate in part for the wasted day. Elaine wouldn't return until almost midnight and there was no sense in staying home alone.

He got his hat and went out to where he'd parked the car in the driveway. He got into it and sat down on something angular and hard. He hoisted himself wrathfully and searched the seat with a groping hand to find the thing he'd sat on.

His fingers closed about it and then he remembered. He'd sat on it on that day Morgan had showed up in answer to the ad. It had been rolling around ever since, unnoticed in the seat.

It was smooth to the touch and warm — warmer than it should be — as if there were a busy little motor humming away inside it.

And suddenly it winked.

He caught his breath and it flashed again.

Exactly like a signal.

Instinct told him to get rid of it, to heave it out the window, but a voice suddenly spoke out of it — a thick, harsh voice that mouthed a sort of chant he could not recognize.

"What the hell?" chattered Homer, fearful now. "What's going on?"

The chanting voice ceased and a heavy silence fell, so thick and frightening that Homer imagined he could feel it closing in on him.

The voice spoke again. This time, it was one word, slow and labored, as if the thick, harsh tongue drove itself to create a new and alien sound.

The silence fell again and there was a sense of waiting. Homer huddled in the seat, cold with fear.

For now he could guess where the cube had come from. Steen had ridden in the car with him and it had fallen from his pocket.

The voice took up again: "Urrr — urr — urrth — mum!"

Homer almost screamed.

Rustling, panting sounds whispered from the cube.

Earthman? Homer wondered wildly. Was that what it had tried to say?

And if that was right, if the cube in fact had been lost by Steen, then it meant that Steen was not a man at all.

HE thought of Steen and the way he wore his shoes and suddenly it became understandable why he might wear his shoes that way. Perhaps, where Steen came from, there was no left or right, maybe not even shoes. No man could expect an alien, a being from some distant star, to get the hang of all Earth's customs — not right away, at least. He recalled the first day Steen had come into the office and the precise way he had talked and how stiffly he'd sat down in the chair. And that other day, six weeks later, when Steen had talked slangily and had sat slouched in his chair, with his

feet planted on the desk.

Learning, Homer thought. Learning all the time. Getting to know his way around, getting the feel of things, like a gawky country youth learning city ways.

But it sure was a funny thing that he'd never learned about the shoes.

The cube went on gurgling and panting and the thick voice muttered and spat out alien words. One could sense the tenseness and confusion at the other end.

Homer sat cold and rigid, with horror seeping into him drop by splashing drop, while the cube blurted over and over a single phrase that meant not a thing to him.

Then, abruptly, the cube went dead. It lay within his hand, cooling, silent, just a thing that looked and felt like a clip-together plastic block for children.

From far off, he heard the roar of a car as it left the curb and sped off in the night. From someone's backyard, a cat meowed for attention. Nearby, a bird cheeped sleepily.

Homer opened the glove compartment and tossed the cube in among the rags and scraper and the dog-eared roadmap and the other odds and ends.

He felt the terror and the loathing and the wild agony begin to drain out of his bones and he sat quietly in the car, trying

to readjust his mind to this new situation — that Steen must be an alien.

He dipped his hand into his pocket and found the replica of the radiator ornament. And that was the key, he knew — not only the key to the many streets of homes, but the key to Steen and the alien world.

They hadn't meant for him to keep the ornament, of course. If he had returned the way he'd entered into the world of the Second Bank, the teller more than likely would have demanded that he give it back. But he'd returned another way, an unexpected way, and it still was in his pocket.

And the radiator ornament, of course, was the reason that Steen had insisted that anyone who leased a house must also buy a car. For the ornament was a key that bridged one world and another. Although, thought Homer, it was rather drastic to insist that a man should buy a car simply so he'd have the correct radiator ornament.

But that might be the way, he told himself, that an alien mind would work.

He was calmer now. The fear still lingered, but pushed back, buried just a little.

EXACTLY how is a man supposed to act, he asked himself, when he learns there are

aliens in the land? Run screeching through the streets, rouse all the citizens, alert the law, go bay-ing on the trail? Or does he continue about his business?

Might he not, he wondered, take advantage of his knowledge, turn it to his own benefit?

He was the only human being on all of Earth who knew.

Steen might not like it known that he was an alien. Perhaps it would be worth a lot to Steen not to have it known.

Homer sat and thought about it. The more he thought, the more reasonable it seemed that Steen might be ready to lay plenty on the line to keep the fact a secret.

Not that I don't have it coming to me, Homer told himself. Not that he hasn't caused me a heap of worry and trouble.

He put his hand into his pocket. The miniature ornament was there. There was no need to wait. Now was as good as any time.

He turned the ignition key and the motor came to life. He backed out of the driveway and took the road to Happy Acres.

The development was dark and quiet. Even the usual advertising signs were turned off in the shop fronts.

He parked in front of Steen's office and got out. Opening the trunk, he found the jack handle in the dark.

He stood staring toward the

gate. There was no sign of the gateman. But that was a chance he'd have to take. If the old fool tried to interfere, he could handle him.

For a moment, in front of the door to Steen's office, he hesitated, trying to reassure himself. Certainly there would be another closet, some way to get to those other worlds, inside the office.

He struck savagely at the glass in the door with the jack handle. The glass splintered and rained down, with crashing, tinkling sounds.

Homer waited, tense, listening, watching. Nothing stirred. The old gateman, if he was around, apparently had not heard the crash.

Carefully, Homer reached through the broken glass and manipulated the night lock. The door swung easily open. He walked inside and closed the door behind him.

IN the empty office, Homer paused until his eyes became accustomed to the deeper darkness. He moved forward, groping with his hands, and found the desk. He could make out the dim bulk of a filing case. There should be a door somewhere. Perhaps not a door into the street, but a door into a hideout—some room where Steen could disappear to eat and rest and sleep; some place that

might have a touch of his alien home about it.

Homer moved from the desk to the filing cabinet and felt along the wall. Almost immediately, he found a door.

He took a firmer grip on the jack handle and twisted on the knob. He walked through the door and there was the room, lighted a garish green by a lantern suspended from the ceiling.

There was sound and the sense of movement. Homer's hair stood straight on end and he felt his skin trying very hard to roll up his back. The hairy monster reached out a paw and grabbed him by the shoulder just as Homer swung around to dive back through the door.

The monster's paw was heavy and very strong. It was hairy and it tickled. Homer opened his mouth to scream, but his tongue dried up and his throat closed and he couldn't make a sound. The jack handle slipped from his numb fingers and clattered to the floor.

For a long moment, he stood there in the grip of the hairy monster and he supposed it had a face, but he could not see the face, for the hair grew all over it and drooped down where its face should be. The monster was a large one, with massive chest and shoulders that tapered down to a slim, athletic waist. Fright-





ened as he was, Homer still could not keep from thinking that it looked a lot like an English sheep-dog with a wrestler's body.

And all the while, there was something rolling on the floor and moaning.

Then the hairy monster said, in halting, stumbling syllables: "You Mister Jackson, you are not?"

Homer made a croaking sound.

"I apologize," the monster told him. "I very poor at your words. I work on your planet survey, but not so good with words."

He motioned at the thing moaning and rolling on the floor. "That was good with words."

The hairy hand dropped from Homer's shoulder.

"That," it said, gesturing at the floor again, "your Mister Steen."

"What is wrong with him?" Homer blurted out. "Is he sick or something?"

"He die himself," the monster said.

"You mean he's dying and you're just standing there —"

"No, no. He — how do you word it right? — he unlive himself."

"You mean he's killing himself? Committing suicide?"

"Yes," the monster said. "He does it very well. Do you not agree?"

"But you can't —"

"He take great pride in it. He

make spectacular. He just starting now. He work up to grand finale. You must stay and watch. It be something to remember."

"No, thank you," Homer said faintly.

HOMER turned to go, but the monster put out a hairy paw and stopped him.

"You must not be afraid of us. I stay half myself, all right? Could change entirely into human, but much trouble. Good enough this way?"

"It's all right," said Homer.

"We owe you debt," the monster said. "This Mister Steen of yours got things all scrambled up."

"I'll say he did," said Homer feelingly.

"He just a stumblebum. Bungler. He likewise is a joker."

"Joker?"

"Clown? Wise guy? You know — he made the joke. Sometimes very sly joke, but stupid just the same."

The monster leaned forward to peer into Homer's face.

"Your planet, it has its jokers, too?"

"Yes, indeed," Homer said. "There's one down the hall from me. His name is Gabby Wilson."

"So you understand then. A joker not too bad if that is all he is. But take a joker who makes mistakes and that is most bad.

You have name for it. Smart aleck?"

"That's the name," said Homer.

"We make projects for the planets, for very many planets. We try to make each project fit the planet. The kind that will help the planet, the kind it needs the most."

"Like foreign aid," Homer supplied.

"So this bungler," said the monster, his voice rising in forthright and honest wrath, "this smart aleck, this nincompoop, this Mister Steen of yours, what do you think he does? He came to Earth as project manager — and he brings wrong plan! He is like that other times, going off not cocked. But this, it is too much. Final straw."

"You mean this Happy Acres business was never meant for Earth, but for some other planet?"

The monster draped his arm around Homer's shoulder in a gesture of understanding and affection. "That exactly what he do. No need of Happy Acres here. You still have room enough for all your people. No need to double up."

"But, sir," said Homer earnestly, "it is a swell idea. It has possibilities."

"Other things you need much worse, my friend. We have better plan for you."

Homer couldn't decide whether he liked the way the monster talked about the better plan.

"What other plan?" he asked.

"That is topmost secret. To make project big success, it must be done so that the natives think they the ones who do it. And that," the monster said, gesturing toward the floor, "is where this silly obscenity failed in second place. He let you find out what was going on."

"BUT there were all the other people, too," Homer protested. "All the people in the shops. The bank president and the gateman and—"

"All of them is us," the monster explained. "Them the crew that came with Mister Steen."

"But they were so human-looking! They looked exactly like us!"

"They play it straight. This ape, he ham it up."

"But they dressed like us and they wore their shoes—"

"The shoes was more joke," the monster said furiously. "Your Mister Steen, he know how to make himself a human like the rest of them. But he wear his shoes wrong to get you humans—your humans—there is a word for it."

"Goat?"

"That is it! He wear them wrong to get your humans' goat. And he make outrageous deal

with you and he watch you worry and he rejoice greatly and think himself superior and smart because he that kind of clown. That, I tell you, is no way to treat anyone. That is no true-blue friendship. But your Mister Steen, he was plain jerk. Let us go and watch him suffer."

"No," said Homer, horrified.

"You no like this dying?"

"It's inhuman."

"Of course, inhuman. We not humans, us. It is a way we have, a social law. He make himself a fool. He make bonehead blunder. He must dead himself. He must do it good. Great honor, do it good. He bungle everything in life, he must not bungle dying. He forever heel if he do."

Homer shivered, listening to the anguish of the alien on the floor, sick at stomach and giddy in the green flood of alien light.

"Now it is to end," said the alien. "We wipe out project. It was nonsensical mistake. We will take it all away."

"You can't mean that!" argued Homer. "We need it. We could make use of it. Just show us the principle."

"No," the monster said.

"But if you wipe out the project, there'll be all these people—"

"Sorry."

"They'll murder me! I was the one who leased the house to them—"

"Too bad," the monster said.
"And all that money in the bank! A quarter of a million dollars, more than a quarter of a million dollars! It will be wiped out!"

"You have human money in bank?"

"I did. I suppose *that's* too bad, too."

"We can pay you off. Mister Steen make lot of money. He store it over there."

HE pointed to the far wall.
"You see that pile of bags? You take all that you can carry."

"Money?" Homer asked.

"Good money."

"All I can carry?" insisted Homer, nailing it down tight.
"And you will let me leave?"

"We do you wrong," the monster said. "This fix it just a little?"

"I'll tell the world," said Homer, with enthusiasm.

Steen was becoming noisier. He had changed into his alien form and now he rolled upon the floor, knotted up and writhing.

Homer walked wide around him to get to the farther wall. He lifted down the bags and they were fairly heavy. He could take two at least, he figured. He hoisted two on his back, then piled on the third. He barely made it back across the room.

The monster watched him with

some admiration. "You like the money, huh?"

"You bet," Homer panted. "Everyone likes money."

He set the bags down by the door.

"You sure you not stay and watch? It get good directly. It be amusing, maybe even interesting."

Homer held down a rising shudder. "No, thank you very much."

The monster helped him get the bags on his shoulder. "I hold the door for you."

"Thank you," said Homer. "Good day to you and thanks for everything."

"Good-by, my friend," the monster said.

He held the door and Homer walked on through.

He came back into the office he'd left an hour before. The glass in the door shattered and his car was parked outside.

Homer hurried.

In less than five minutes, he went roaring out the gate, with the bags of money locked inside the trunk.

There was little time, he realized. What he did had to be done fast. For when the monster wiped out Happy Acres, there would be a battalion of families marooned there in the woods and they'd come boiling out with a single thought in mind—to get

their hands on Homer Jackson.

He tried to imagine what it might be like, and then he tried to stop thinking what it might be like, but couldn't.

There would be a lot of people there without any houses. They'd wake up in the wild, wet woods, with their furniture and belongings scattered all about them. And all those bright new cars would be in among the trees. And the people would be plenty sore.

Not that he blamed them much.

He was sore himself.

That lousy Steen, he said. Like that contractor Gabby told about — the one who went out on a wrecking job and demolished the wrong house.

THE dashboard clock said slightly after midnight. Elaine would be home by now and they could start right out.

Homer turned into the driveway and braked to a halt. There was a light in the kitchen window. He ran up the walk and burst into the house.

"Oh, *there* you are," said Elaine. "I wondered where you were. What's wrong with you?"

"We're getting out of here," Homer babbled.

"Have you gone stark crazy? Getting out!"

"Now for once," said Homer,

"don't give me an argument. We're getting out of here. Tonight. I've got three sacks of money out there in the car—"

"Money! How did you get three sacks—"

"It's legal," Homer pleaded. "There's nothing wrong with it. I didn't rob a bank. There's no time to explain. Let us just get going."

She got icy calm. "Where are we going, Homer?"

"We can decide that later. Maybe Mexico."

"You're ill," she scolded. "You've been working too hard lately. And worrying about that Happy Acres deal—"

It was too much for Homer. He turned toward the door.

"Homer! Where are you going, Homer!"

"I'll show you the money," he gritted. "I'll show you I really have it."

"Wait for me," she cried, but he didn't wait. She ran down the walk behind him.

He opened the car trunk. "There it is. We'll carry it up to the house. You can take off your shoes and walk in it. Then maybe you'll believe me."

"No, Homer, no!"

"Here, help me with these sacks," he said.

Inside the house, he opened the sacks. Neatly bundled sheafs of bills spilled out on the floor.

Elaine knelt and picked up a package.

"Why, it's real!" she cried happily.

"Of course it is," said Homer.

"And, Homer, these are twenty-thousand-dollar bills!"

She dropped the package that she held and picked up another and another and another.

"And so are these!" she screamed. "There are millions and millions here!"

Homer was pawing desperately through the heap of money. Sweat was running down his face.

"Are they all twenty-thousand-dollar bills?" she asked hopefully.

"Yes," said Homer in a beaten voice.

"But what is wrong?"

"That dirty, lowdown, bungling Steen," he said bitterly.

"But what is wrong?" she cried again.

"They aren't worth a dime," said Homer. "There are no such things as twenty-thousand-dollar bills. The Treasury never issued any!"

—CLIFFORD D. SIMAK



FORECAST

THE KNIGHTS OF ARTHUR, next month's novella by Frederik Pohl, ride into a land stranger than any predicted by Merlin or Nostradamus, with a Round Table that exists only anatomically, on a quest for a grail that is neither a grail nor holy, and only very incidentally and reluctantly jousting and rescuing lovely — oh, no, not maidens. The monarch they serve is one of the Most Unforgettable Characters in all science fiction. With a single suitcase as his domain, Arthur is desperately in need of his henchmen and their arms — for his keys to a kingdom are typewriter keys — and they very literally are the keys to a kingdom!

In Clifford D. Simak's long novelet, *Duncan*, like every farmer on every planet, has to hunt down anything that damages his crops — even though he is aware that this is THE WORLD THAT COULDN'T BE!

Another novelet — possibly; the two lead stories are tall, broad, well-muscled, and need plenty of room to move around in.

Short stories and features — of course, and Willy Ley explores LIFE WITHOUT GRAVITY in the most compact and exciting survey yet made of the untrammelled existence beyond the atmosphere that has scared writers silly — sillier, in many instances, than they realized. For there isn't as much need for speculation as you might think. We do have hot data and lots of it!



Yes — \$1⁰⁰ Brings You Any 3 of These Great Books

WITH
MEMBERSHIP

Values Up to \$12.85 in Publishers' Editions!

Each Book Packed from Cover to Cover with thrills of Top-Flight Science-Fiction... and Science FACT!

THE ASTOUNDING SCIENCE-FICTION ANTHOLOGY. A story about the first A-Bomb... written before it was invented! Plus a score of other best tales from a dozen years of Astonishing Science-Fiction Magazine. (Pub. ed. \$8.50)

THE BEST FROM FANTASY AND SCIENCE-FICTION. (New edition) 17 thrilling stories selected from *Fantasy and Science-Fiction Magazine*. Adventure in other worlds... mystery, intrigue, suspense! (Pub. ed. \$3.95)

TREASURY OF SCIENCE-FICTION CLASSICS. 4 famous novels, a complete play; stories of all-time great S-F stories, including H. G. Wells "Invasion from Mars," made famous by Orson Welles' book newscast. (Pub. ed. \$2.55)

NOW—THE BEST NEW SCIENCE-FICTION BOOKS FOR ONLY \$1.00 EACH!

IMAGINE—ANY 3 of these full-size, brand-new science-fiction books—yours for just \$1! Crammed with thrills... written by top-notch science-fiction authors. An \$8.95 to \$12.85 value, complete in handsome, permanent hardcover. Each month the science-fiction novel club brings you the finest brand-new full-length books for ONLY \$1 EACH (plus a few cents shipping charges)—even though they cost \$2.50, \$3.95 and up in publishers' editions! You take ANY three books you really want—no more as a year.

SEND NO MONEY

Take your choice of ANY 3 of the new books described here—at only \$1 for ALL 3. Two are your gift books for joining; the other is your first selection. Mail coupon RIGHT NOW to:

SCIENCE-FICTION BOOK CLUB
Dept. G-X-12, Garden City, N. Y.

REPORT ON UNIDENTIFIED FLYING OBJECTS by Edward J. Ruppelt. At last! The first authoritative report on hitherto hush-up facts about "flying saucers"... by a former Air Force expert in charge of their investigation, NOT fiction, but amazing fact! (Pub. ed. \$4.95)

OMNIBUS OF SCIENCE-FICTION. 14 classic stories by top authors. Wonders of Earth and Man. Amazing Inventions. Space Travel and Visions from Outer Space. Adventure in Dimensions. Worlds of Tomorrow. (Pub. ed. \$1.50)

BEST SCIENCE-FICTION STORIES AND NOVELS: 1938. Edited by R. Dicks. 14 top-notch short stories and novelettes by such well-known writers as Robert Heinin, Frank Robinson, Mark Clifton, many others. (Pub. ed. \$3.95)

DRAGON IN THE SEA by Frank Herbert. You're on a 2nd century underwater mission from which no human has ever returned. Now, 8000 feet down, an unknown creature wants you DEAD! (Pub. ed. \$2.00)

SATELLITE by Erik Berglund & William Bell. Top secrets reveal full FACTS on the first man-made Satellite—information not even available in technical journals! (Pub. ed. \$2.95)

THE END OF ETERNITY by C. S. Lewis. You look like other men, but you're an Eternal—not from a timeless realm to change history. But you decided to travel through time and space to find forbidden love. (Pub. ed. \$2.95)

WHICH 3 DO YOU WANT \$1⁰⁰? FOR ONLY

SCIENCE-FICTION BOOK CLUB
Dept. G-X-12, Garden City, N. Y.

Please mark me the 3 books checked below, on my gift books and first selection. Mail me only \$1 for all three (plus few cents shipping, charges), and credit me as a member of the Science-Fiction Book Club. Every month send me the Club's free bulletin, "Things to Come," so that I may decide whether or not I wish to receive the exciting selection described therein. For each book I accept, I will pay only \$1 plus shipping. I do not have to take a book every month (until, for example, each year I am a member)—and I can choose at any time after receiving my selection.

SPECIAL NO-RISK GUARANTEE: If not delighted, I may return all books in 14 days, no asking, and this no-asking will be credited.

- ☐ Astounding Science-Fiction Anthology
☐ Best from Fantasy & S-F
☐ Best S-F Stories and Novels
☐ Dragon in the Sea

- ☐ End of Eternity
☐ Omnibus of Science-Fiction
☐ Report on UFO's
☐ Satellite
☐ Treasury of S-F Classics

Name _____ (Please Print)

Address _____

City _____ State _____

NAME OFFER TO RESIDENTS OF CANADA: Address, Science-Fiction Book Club, 105 Bond St., Toronto 2 (offer good in U.S.A. & Canada only)

The Most Generous Offer Ever Made By
The SCIENCE-FICTION BOOK CLUB

TAKE
Any 3
OF THESE THRILLING
SCIENCE-FICTION
BEST-SELLERS
Yours for Only \$ **1.00**
WITH
MEMBERSHIP

AN \$8.85 TO \$12.85 VALUE—
YOU PAY JUST \$1 FOR ANY 3!

Here's an offer just as amazing as the thrilling stories crammed between the covers of these books! These nine volumes contain not only "top-drawer" science-fiction, but science FACTS as well. Handsome, permanent bindings. Any 3 of them would normally cost you \$8.85 to \$12.85 in publishers' original editions—but you pay only \$1.00 when you join the Club!

This generous offer is made to introduce you to the SCIENCE-FICTION BOOK CLUB, a wonderful new idea in bringing you the best of the new science-fiction books—at a mere fraction of their usual cost!

See Other Side for Full Details...

